

Access DB# 158171**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 6-30-'05  
Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/673,332  
Mail Box and Bldg/Room Location: 9064 Results Format Preferred: (circle) PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bib. attached

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

— Please search for the polymer of claim #1  
(Formula (I))

\* Please call me if you have too many  
hits and have to restrict the search

\*\*\*\*\*  
**STAFF USE ONLY**

|  | Type of Search         | Vendors and cost where applicable |
|--|------------------------|-----------------------------------|
| Searcher: <u>Wsk</u>                   | NA Sequence (#) _____  | STN <u>506.39</u>                 |
| Searcher Phone #: _____                | AA Sequence (#) _____  | Dialog _____                      |
| Searcher Location: _____               | Structure (#) <u>3</u> | Questel/Orbit _____               |
| Date Searcher Picked Up: <u>7/5/05</u> | Bibliographic _____    | Dr.Link _____                     |
| Date Completed: <u>7/5/05</u>          | Litigation _____       | Lexis/Nexis _____                 |
| Searcher Prep & Review Time: <u>30</u> | Fulltext _____         | Sequence Systems _____            |
| Clerical Prep Time: <u>30</u>          | Patent Family _____    | WWW/Internet _____                |
| Online Time: <u>120</u>                | Other _____            | Other (specify) _____             |

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application:

**LISTING OF CLAIMS:**

Claim 1. (currently amended): A polymerizable composition comprising a binder polymer having a repeating unit represented by the following formula (I) and a repeating unit having a radical-polymerizable group represented by the following formula (A) or (C), an infrared absorbent, a polymerization initiator and a polymerizable compound,

Formula (I)

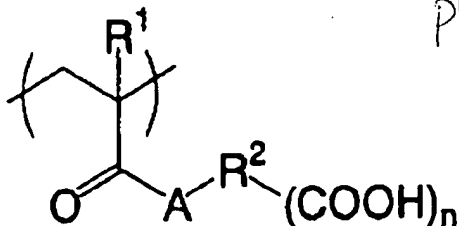
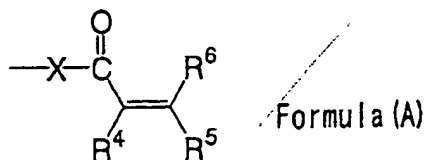
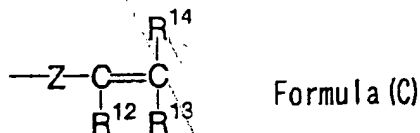


Photo initiator  
Photopolymerization initiator.

wherein R<sup>1</sup> represents a hydrogen atom or a methyl group; R<sup>2</sup> represents a linking group which includes two or more atoms selected from the group consisting of a carbon atom, a hydrogen atom, an oxygen atom, a nitrogen atom and a sulfur atom and has a number of atoms of 2 to 82; A represents an oxygen atom or  $[-NR^3-]$  in which R<sup>3</sup> represents a hydrogen atom or a monovalent hydrocarbon group having 1 to 10 carbon atoms; and n represents an integer of 1 to 5;



wherein R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> each independently represent a hydrogen atom, or a monovalent substituent; and X represents an oxygen atom, a sulfur atom or N-R<sup>15</sup> in which R<sup>15</sup> represents a hydrogen atom or monovalent organic group;



wherein R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> each independently represent a hydrogen atom, or a monovalent substituent; and Z represents an oxygen atom, a sulfur atom or N-R<sup>15</sup> or a phenylene group, in which R<sup>15</sup> represents a hydrogen atom or a monovalent organic group.

Claim 2. (previously presented): The polymerizable composition according to claim 1, wherein the number of atoms constituting a skeleton of the linking group represented by R<sup>2</sup> in the binder polymer having the repeating unit represented by formula (I) is 1 to 30.

=> fil reg

FILE 'REGISTRY' ENTERED AT 13:40:51 ON 05 JUL 2005

=> d his ful

FILE 'HCAPLUS' ENTERED AT 10:09:10 ON 05 JUL 2005

L1 1 SEA ABB=ON PLU=ON US20050064330/PN

D SCAN

D ALL

SEL RN

L2 1 SEA ABB=ON PLU=ON US20040072101/PN

D SCAN

D ALL

SEL RN

FILE 'REGISTRY' ENTERED AT 10:12:19 ON 05 JUL 2005

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88403-59-2/BI OR 88403-63-8/BI OR 94888-55-8/BI)

D SCAN

L4 40 SEA ABB=ON PLU=ON (120307-06-4/BI OR 127820-39-7/BI  
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OR 658705-94-3/BI OR 676349-35-2/BI OR 676349-36-3/BI  
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OR 676349-79-4/BI OR 676349-80-7/BI)

D SCAN

FILE 'LREGISTRY' ENTERED AT 11:23:23 ON 05 JUL 2005

L5 STR

L6 STR

L7 STR

L8 STR L5

FILE 'REGISTRY' ENTERED AT 11:30:42 ON 05 JUL 2005

L9 50 SEA SSS SAM L8

L10 SCR 2043

L11 50 SEA SSS SAM L8 AND L10

D QUE STAT L11

L12 13539 SEA SSS FUL L8 AND L10

SAV L12 LEE926/A

L13 50 SEA SUB=L12 SSS SAM (L6 OR L7)

L14 13539 SEA SUB=L12 SSS FUL (L6 OR L7)

L15 8126 SEA ABB=ON PLU=ON L14 AND 2-4/NC

FILE 'HCAPLUS' ENTERED AT 12:27:39 ON 05 JUL 2005

L16 6388 SEA ABB=ON PLU=ON L12

L17 4459 SEA ABB=ON PLU=ON L15

L18 68 SEA ABB=ON PLU=ON L16 (L) (PHOTO? (A) INITIATOR? OR  
PHOTOPOLYMERIZATION? (A) INITIATOR? OR INITIATOR?)

L19 54 SEA ABB=ON PLU=ON L17 (L) (PHOTO? (A) INITIATOR? OR  
PHOTOPOLYMERIZATION? (A) INITIATOR? OR INITIATOR?)

D FHITSTR

D FHITSTR 2-3

SEL L18 HIT RN 1-  
SEL L19 HIT RN 1-

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D QUE L16

FILE 'HCAPLUS' ENTERED AT 12:54:52 ON 05 JUL 2005  
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D L18 1-68 IBIB ABS HITSTR HITIND  
D QUE L16  
D COST

FILE 'REGISTRY' ENTERED AT 13:40:51 ON 05 JUL 2005

FILE HCAPLUS

FILE REGISTRY

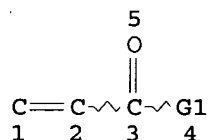
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provided by InfoChem.

FILE LREGISTRY

LREGISTRY IS A STATIC LEARNING FILE

=> d que 117

L6 STR



VAR G1=O/S/N

NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

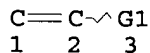
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NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L7 STR



VAR G1=O/S/N/CB

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

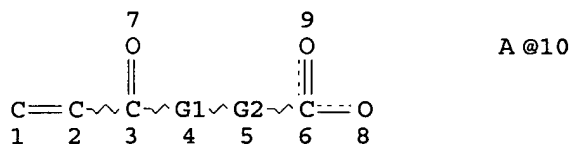
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L8 STR



VAR G1=O/N  
 REP G2=(2-20) 10  
 NODE ATTRIBUTES:  
 NSPEC IS RC AT 10  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE  
 L10 SCR 2043  
 L12 13539 SEA FILE=REGISTRY SSS FUL L8 AND L10  
 L14 13539 SEA FILE=REGISTRY SUB=L12 SSS FUL (L6 OR L7)  
 L15 8126 SEA FILE=REGISTRY ABB=ON PLU=ON L14 AND 2-4/NC  
 L17 4459 SEA FILE=HCAPLUS ABB=ON PLU=ON L15

=> fil hcap  
 FILE 'HCAPLUS' ENTERED AT 13:41:42 ON 05 JUL 2005

=> d l19 1-54 ibib abs hitstr hitind

L19 ANSWER 1 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:38 HCAPLUS  
 DOCUMENT NUMBER: 142:261842  
 TITLE:  $\beta$ -Sheet Side Chain Polymers Synthesized  
 by Atom-Transfer Radical Polymerization  
 AUTHOR(S): Ayres, Lee; Adams, P. Hans H. M.; Loewik,  
 Dennis W. P. M.; Van Hest, Jan C. M.  
 CORPORATE SOURCE: Organic Chemistry Department, Institute for  
 Molecules and Materials (IMM), Radboud  
 University Nijmegen, Nijmegen, 6525 ED, Neth.  
 SOURCE: Biomacromolecules (2005), 6(2), 825-831  
 CODEN: BOMAF6; ISSN: 1525-7797  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Silks are a widely studied class of naturally occurring structural proteins. Dragline spider silk, in particular, is considered to be nature's high-performance material due to its remarkable combination of strength and toughness. These mech. properties stem from the protein secondary structure, a combination of well-defined  $\beta$ -sheets in a less well-defined glycine-rich matrix. The translation of this structure into a synthetic polymer was the aim of this investigation. To achieve this, a peptide-based monomer containing the sequence alanine-glycine-alanine-glycine, a well-known  $\beta$ -sheet-forming sequence found in silk, was synthesized. Using atom-transfer radical polymerization and a bifunctional initiator, a well-defined peptide-based polymer was

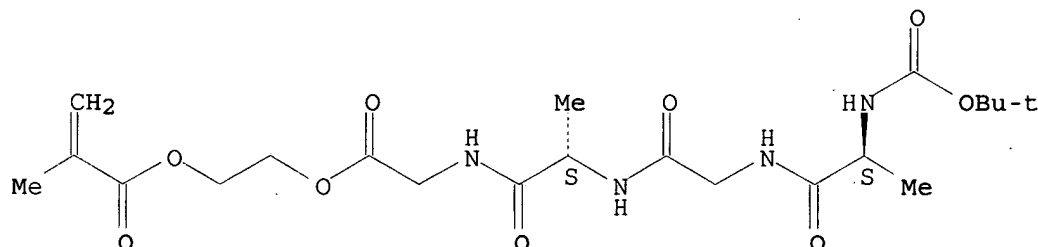
prepared This was then used as the macroinitiator for the polymerization of Me methacrylate. The resulting well-defined triblock copolymer was analyzed using IR spectroscopy, which clearly showed  $\beta$ -sheet secondary structure had been introduced.

IT 845822-55-1DP, deprotected  
 ( $\beta$ -sheet alanine-glycine side chain polymethacrylates synthesized by atom-transfer radical polymerization with a bifunctional initiator)  
 RN 845822-55-1 HCAPLUS  
 CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-L-alanylglycyl-L-alanyl-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with methyl 2-methyl-2-propenoate, triblock (9CI) (CA INDEX NAME)

CM 1

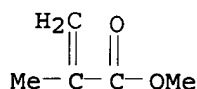
CRN 530159-43-4  
 CMF C21 H34 N4 O9

Absolute stereochemistry.



CM 2

CRN 80-62-6  
 CMF C5 H8 O2

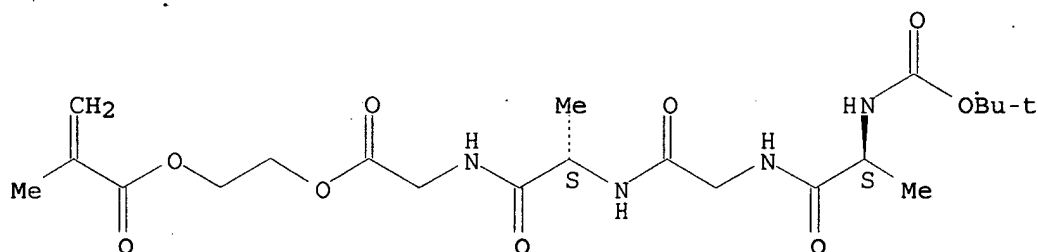


IT 845822-55-1P  
 ( $\beta$ -sheet alanine-glycine side chain polymethacrylates synthesized by atom-transfer radical polymerization with a bifunctional initiator)  
 RN 845822-55-1 HCAPLUS  
 CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-L-alanylglycyl-L-alanyl-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with methyl 2-methyl-2-propenoate, triblock (9CI) (CA INDEX NAME)

CM 1

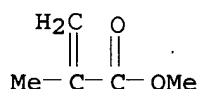
CRN 530159-43-4  
 CMF C21 H34 N4 O9

Absolute stereochemistry.



CM 2

CRN 80-62-6  
CMF C5 H8 O2



CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 34

IT 845822-55-1DP, deprotected

(β-sheet alanine-glycine side chain polymethacrylates  
synthesized by atom-transfer radical polymerization with a  
bifunctional initiator)

IT 845822-55-1P

(β-sheet alanine-glycine side chain polymethacrylates  
synthesized by atom-transfer radical polymerization with a  
bifunctional initiator)

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L19 ANSWER 2 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1122112 HCAPLUS

DOCUMENT NUMBER: 143:13125

TITLE: Effect of polymerization conditions on the  
network properties of dex-HEMA microspheres  
and macro-hydrogels

AUTHOR(S): Chung, J. T.; Vlught-Wensink, K. D. F.;  
Hennink, W. E.; Zhang, Z.

CORPORATE SOURCE: Centre for Formulation Engineering, Chemical  
Engineering, School of Engineering, The  
University of Birmingham, Edgbaston,  
Birmingham, B15 2TT, UK

SOURCE: International Journal of Pharmaceutics (2005),  
288(1), 51-61  
CODEN: IJPHDE; ISSN: 0378-5173

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Dextran-hydroxy-ethyl-methacrylate (dex-HEMA) hydrogels in the  
form of microspheres are an attractive system for the controlled  
delivery of protein drugs. In this work, the microspheres were  
prepared by a water-in-water emulsion polymerization process. The  
polymerization



reaction was initiated by potassium peroxodisulfate (KPS) and catalyzed by N,N,N',N'-tetramethylethylenediamine (TEMED). The effect of the initiator concentration, reaction temperature and pH on the mech. and network properties of the microspheres were investigated. The size and size distribution of the microspheres, equilibrium water content, and methacrylate conversion were also determined. The mech. properties of single microspheres were measured by a micromanipulation technique and the rheol. characteristics of the same material in the form of macroscopic hydrogel slabs were determined by a controlled stress rheometer. The results showed that the Young's moduli of the microspheres and of macroscopic slabs measured by these two methods were in good agreement. Higher KPS initiator concns. resulted in a more rapid polymerization with a shorter gelation and lag time, and a higher Young's modulus of the gels. An increase in temperature also resulted in a more rapid polymerization with a shorter gelation and lag time. However, the Young's modulus of the gels decreased with an increase in polymerization temperature. The pH had no significant effect on the mech. properties of the microspheres. This study demonstrated that the network properties of dex-HEMA hydrogels can be tailored by the polymerization conditions, which opens the possibility to modulate the release rate of entrapped compds.

IT 188550-24-5P

(effect of **initiators** and catalysts on the polymer network of dextran-HEMA microspheres and hydrogels for drug delivery)

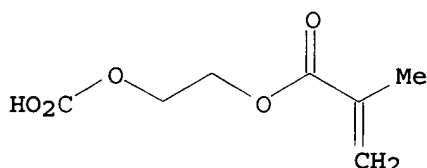
RN 188550-24-5 HCAPLUS

CN Dextran, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl carbonate] (9CI) (CA INDEX NAME)

CM 1

CRN 188477-76-1

CMF C7 H10 O5



CM 2

CRN 9004-54-0

CMF Unspecified

CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 35

IT 188550-24-5P

(effect of **initiators** and catalysts on the polymer network of dextran-HEMA microspheres and hydrogels for drug delivery)

REFERENCE COUNT:

32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 3 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:957222 HCAPLUS

DOCUMENT NUMBER: 141:403512

TITLE: Photosensitive polymer compositions,  
manufacture of flexographic printing plates by  
using them, and laser engraving method using  
them

INVENTOR(S): Tomita, Yoko; Tomeba, Hiroshi; Yamada, Hiroshi

PATENT ASSIGNEE(S): Asahi Kasei Chemical Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| JP 2004314334 | A2   | 20041111 | JP 2003-108111  | 2003<br>0411 |

PRIORITY APPLN. INFO.:

JP 2003-108111

2003  
0411

AB The plates, showing uniform thickness and reduced viscous residues after concave pattern formation by laser irradiation, are manufactured by forming layers of the compns. (liquid at 20°) containing polymers (A, liquid at 20°), polymerizable unsatd. group-containing organic compds. (B), inorg. porous materials (C), H-withdrawing photopolymn. initiators (D), and decomposable photopolymn. initiators (E) on sheet-type or cylindrical support and irradiating them with light in air, wherein the content of (D + E) is 0.1-10% of the compns.

IT 651043-77-5P

(photosensitive polymer compns. containing two types of polymerization  
initiators for laser-engraving flexog. printing plates)

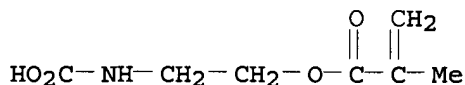
RN 651043-77-5 HCAPLUS

CN Benzene, 1,3-diisocyanatomethyl-, polymer with PCDL-L 4672,  
[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]carbamate (9CI) (CA  
INDEX NAME)

CM 1

CRN 96571-20-9

CMF C7 H11 N O4



CM 2

CRN 600173-36-2

CMF (C9 H6 N2 O2 . Unspecified)x

CCI PMS

CM 3

CRN 600173-35-1

CMF Unspecified

CCI PMS, MAN

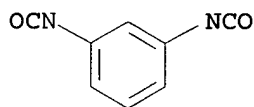
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



D1-Me

IC ICM B41C001-05

ICS B41N001-12; G03F007-00; G03F007-004; G03F007-031; G03F007-36

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 923-26-2DP, 2-Hydroxypropyl methacrylate, reaction products with polyoxyalkylene-polyurethane 9069-50-5DP, Polytetramethylene glycol-tolylene diisocyanate copolymer, reaction products with hydroxypropyl methacrylate and polypropylene glycol monomethacrylate 39420-45-6DP, Polypropylene glycol monomethacrylate, reaction products with polyoxyalkylene-polyurethane 651043-77-5P

(photosensitive polymer compns. containing two types of polymerization initiators for laser-engraving flexog. printing plates)

L19 ANSWER 4 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:217309 HCAPLUS

DOCUMENT NUMBER: 140:254613

TITLE: Cellulose acylate films, their manufacture, and their uses in optical films, liquid crystal displays, and photographic materials

INVENTOR(S): Kato, Eiichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE  | APPLICATION NO. | DATE  |
|------------|------|-------|-----------------|-------|
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JP 2004083799

A2

20040318

JP 2002-249041

2002

0828

PRIORITY APPLN. INFO.:

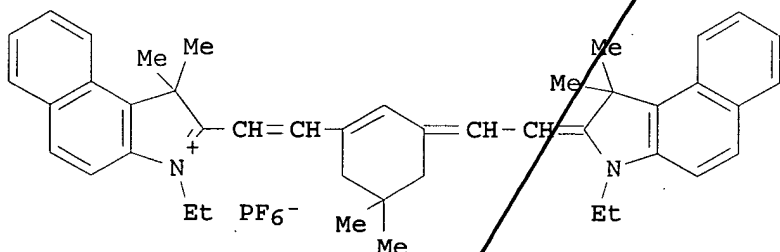
JP 2002-249041

2002

0828

OTHER SOURCE(S):  
GI

MARPAT 140:254613



AB The films are manufactured by casting cellulose acylate compns. containing radically polymerizable monomers, near-IR sensitizers, and photopolymer. initiators and irradiating with near-IR. Thus, a film was manufactured from a dope containing cellulose triacetate, a plasticizer, SiO<sub>2</sub> microparticles, a UV absorber, sensitizer I, tetrabutylammonium 2,4,6-trifluorotetraphenylborate, and N-phenylglycine. The film showed good releasability, low haze, high tear strength, no contamination, and good resistance to weathering and storage at high temperature and humidity.

IT 658059-89-3P 658059-91-7P 658060-06-1P  
658060-09-4P 671233-73-1P

(manufacture of cellulose acylate films from dopes containing monomers, near-IR sensitizers, and photopolymer. initiators)

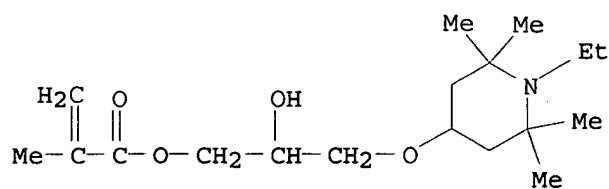
RN 658059-89-3 HCAPLUS

CN Butanedioic acid, 5-[4-(5-chloro-2H-benzotriazol-2-yl)-5-hydroxy-2-methylphenoxy]-2-hydroxypentyl 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with cyclooctylmethyl 2-propenoate, 3-[(1-ethyl-2,2,6,6-tetramethyl-4-piperidinyl)oxy]-2-hydroxypropyl 2-methyl-2-propenoate and 2-[[[3-hydroxy-2,2-bis[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 658059-88-2

CMF C18 H33 N O4

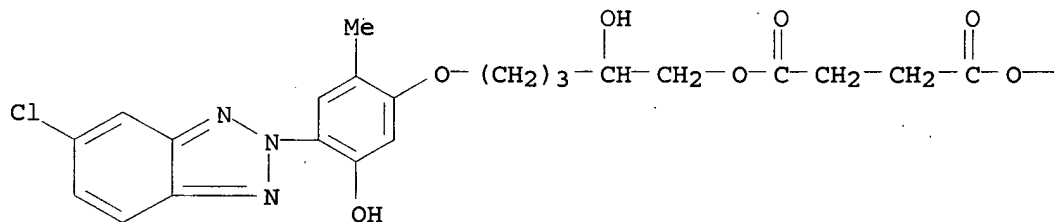


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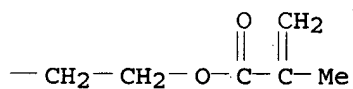
CRN 658059-87-1

CMF C28 H32 Cl N3 O9

PAGE 1-A



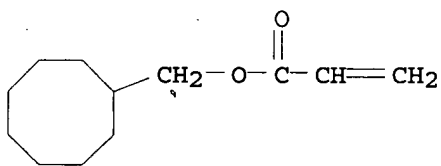
PAGE 1-B



CM 3

CRN 654072-00-1

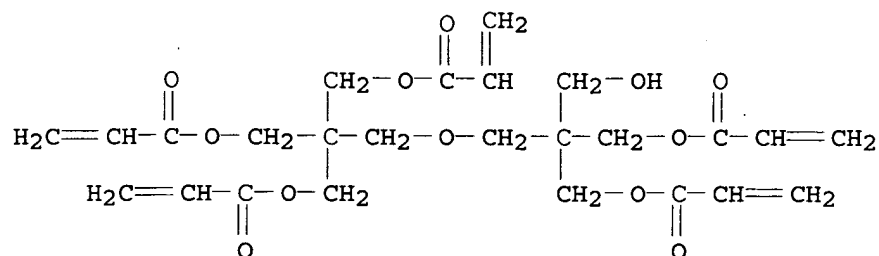
CMF C12 H20 O2



CM 4

CRN 60506-81-2

CMF C25 H32 O12



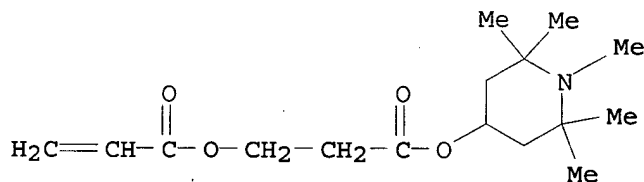
RN 658059-91-7 HCAPLUS

CN 2-Propenoic acid, 2-[[[3-hydroxy-2,2-bis[[[1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 3-(4-benzoyl-3-hydroxyphenoxy)-2-hydroxypropyl 2-propenoate, cyclooctylmethyl 2-propenoate and 3-oxo-3-[(1,2,2,6,6-pentamethyl-4-piperidinyloxy)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 658059-90-6

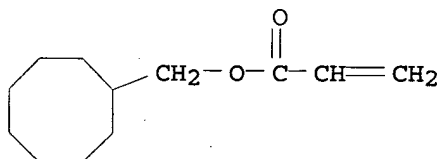
CMF C16 H27 N O4



CM 2

CRN 654072-00-1

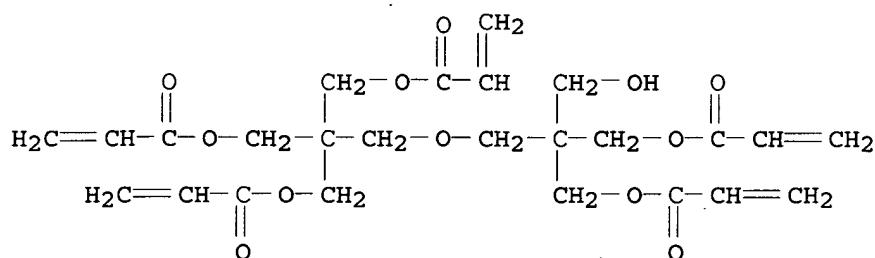
CMF C12 H20 O2



CM 3

CRN 60506-81-2

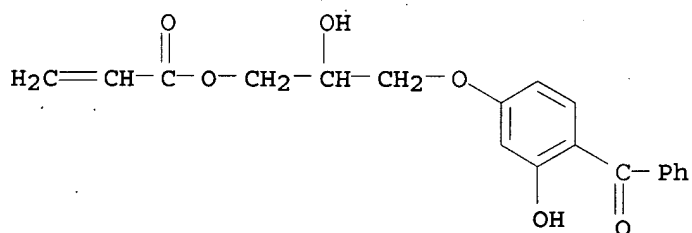
CMF C25 H32 O12



CM 4

CRN 1843-07-8

CMF C19 H18 O6



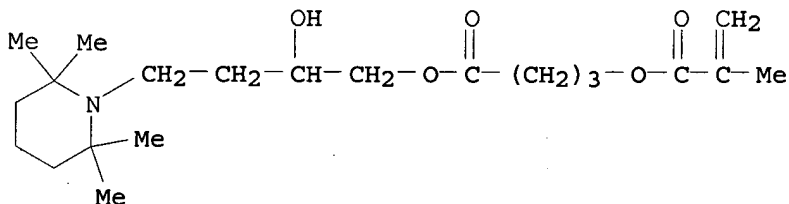
RN 658060-06-1 HCAPLUS

CN Butanoic acid, 4-[(2-methyl-1-oxo-2-propenyl)oxy]-, 2-hydroxy-4-(2,2,6,6-tetramethyl-1-piperidinyl)butyl ester, polymer with cyclooctylmethyl 2-propenoate, 2-[[[3-hydroxy-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 2-cyano-3-(4-methoxyphenyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 658060-05-0

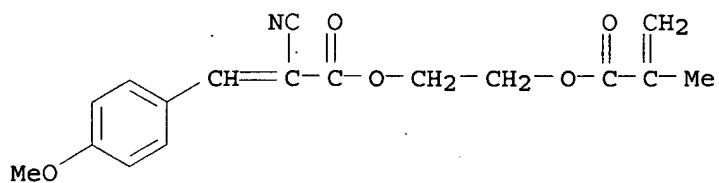
CMF C21 H37 N O5



CM 2

CRN 658060-04-9

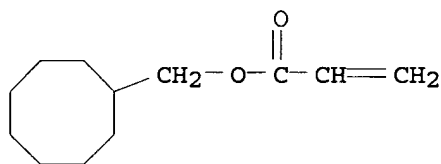
CMF C17 H17 N O5



CM 3

CRN 654072-00-1

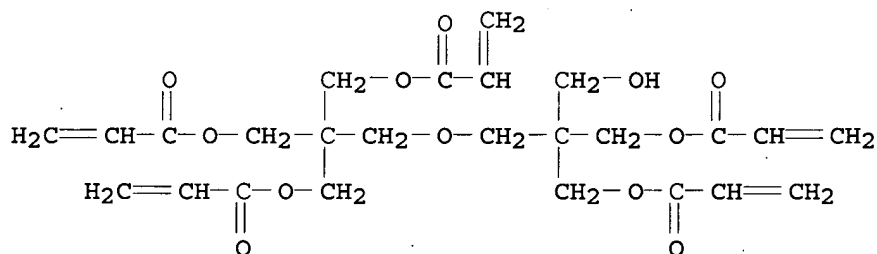
CMF C12 H20 O2



CM 4

CRN 60506-81-2

CMF C25 H32 O12



RN 658060-09-4 HCAPLUS

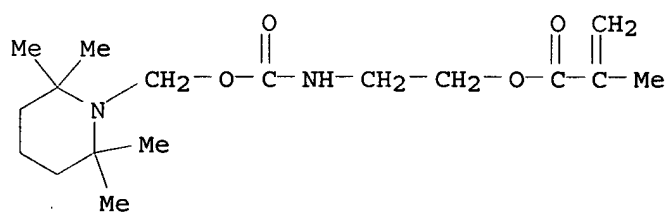
CN 2-Propenoic acid, 2-methyl-, 2-[[[(2,2,6,6-tetramethyl-1-piperidinyloxy)methoxy]carbonyl]amino]ethyl ester, polymer with 3-[4-[4,6-bis(4-methylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]-3-oxopropyl 2-propenoate, cyclooctylmethyl 2-propenoate and 2-[[[3-hydroxy-2,2-bis[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 658060-08-3

CMF C17 H30 N2 O4

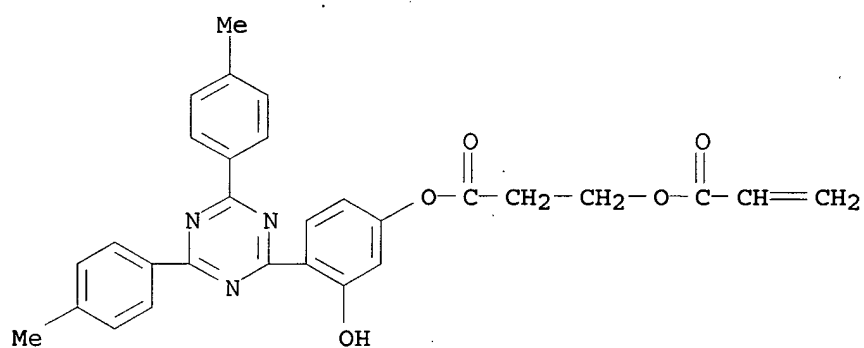




CM 2

CRN 658060-07-2

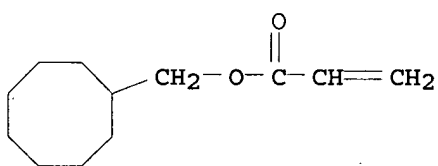
CMF C29 H25 N3 O5



CM 3

CRN 654072-00-1

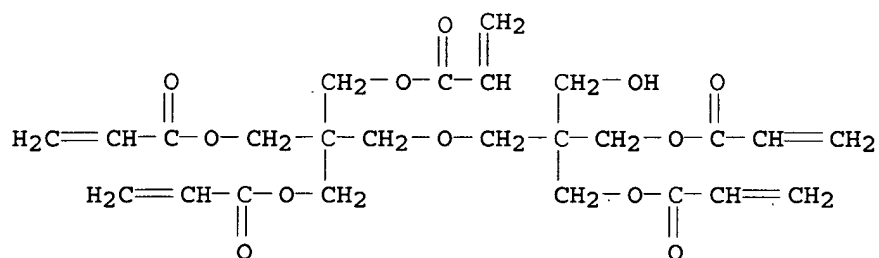
CMF C12 H20 O2



CM 4

CRN 60506-81-2

CMF C25 H32 O12



RN 671233-73-1 HCAPLUS

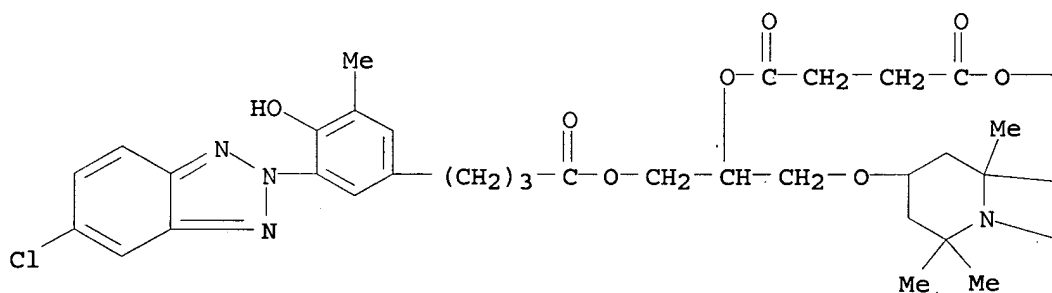
CN Butanedioic acid, 1-[[4-[3-(5-chloro-2H-benzotriazol-2-yl)-4-hydroxy-5-methylphenyl]-1-oxobutoxy]methyl]-2-[(1,2,2,6,6-pentamethyl-4-piperidinyl)oxy]ethyl 2-[(1-oxo-2-propenyl)oxy]ethyl ester, polymer with 3-bicyclo[2.2.2]oct-1-ylpropyl 2-methyl-2-propenoate and 2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

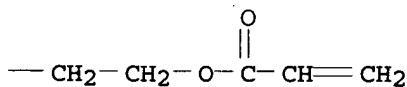
CRN 658060-39-0

CMF C39 H51 Cl N4 O10

PAGE 1-A



PAGE 1-B



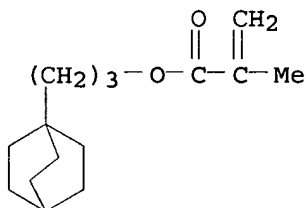
— Me

— Me

CM 2

CRN 658060-12-9

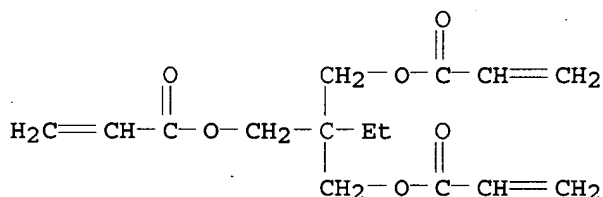
CMF C15 H24 O2



CM 3

CRN 15625-89-5

CMF C15 H20 O6



IC ICM C08J005-18

ICS B29C041-24; C08F002-44; C08F002-46; C08F251-02; G02B005-30;  
G02F001-1335; G02F001-1336; G03C001-795; B29K001-00;  
B29L007-00; C08L001-10

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73, 74

IT 9011-14-7P, Poly(methyl methacrylate) 99732-63-5P 658059-80-4P  
658059-82-6P 658059-84-8P **658059-89-3P**  
**658059-91-7P** 658059-97-3P 658060-00-5P 658060-03-8P  
**658060-06-1P** **658060-09-4P** 666837-41-8P  
671233-68-4P 671233-70-8P 671233-72-0P **671233-73-1P**  
671233-75-3P 671234-43-8P

(manufacture of cellulose acrylate films from dopes containing monomers,  
near-IR sensitizers, and **photopolymer**  
**initiators**)

L19 ANSWER 5 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:200844 HCAPLUS

DOCUMENT NUMBER: 140:243700

TITLE: Photopatternable transparent resin  
compositions and displays with components  
manufactured therefrom

INVENTOR(S): Sato, Hiroyuki; Itami, Setsuo; Watanabe, Eiji

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

JP 2004077773

A2

20040311

JP 2002-237753

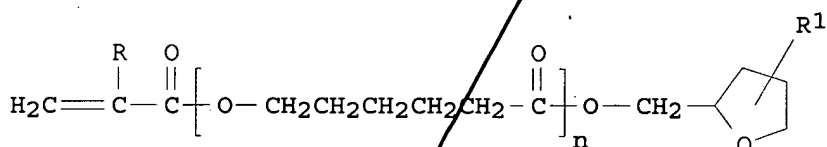
2002  
0819

PRIORITY APPLN. INFO.:

JP 2002-237753

2002  
0819

GI



I

AB The comps. comprise (A) alkali-soluble resins with acid value 20-200 mg-KOH/g, (B) double-bond-containing compds., (C) photopolymerization initiators, (D) polymerization inhibitors, and (E) solvents and satisfy weight ratio C/(A + B + C + D) 0.01-0.5 and D/(A + B + C + D) 0.001-0.05. The alkali-soluble resins may be prepared from carboxyl-bearing radical monomers and benzyl (meth)acrylate, cyclohexyl (meth)acrylate, isobornyl (meth)acrylate, 2-hydroxypropyl (meth)acrylate, 2-hydroxyethyl (meth)acrylate, styrene, N-phenylmaleimide, polystyrene macromonomers, and/or I (R = H, Me; R' = H, C1-5 alkyl; n = 1-5). The comps. show excellent transparency, high sensitivity and resolution, developability, storage stability, etc.

IT 275798-91-9P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-Kayrad TC 110S copolymer (alkali-soluble components; transparent photoimaging materials satisfying prescribed content of initiators and of polymerization inhibitors for displays)

RN 275798-91-9 HCAPLUS

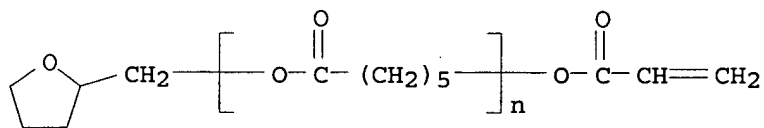
CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, phenylmethyl 2-methyl-2-propenoate and  $\alpha$ -[(tetrahydro-2-furanyl)methyl]- $\omega$ -[(1-oxo-2-propenyl)oxyl]poly[oxy(1-oxo-1,6-hexanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 87320-06-7

CMF (C6 H10 O2)n C8 H12 O3

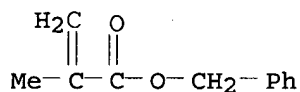
CCI PMS



CM 2

CRN 2495-37-6

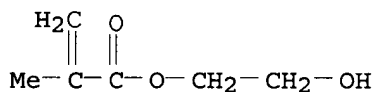
CMF C11 H12 O2



CM 3

CRN 868-77-9

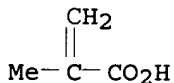
CMF C6 H10 O3



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-033

ICS G03F007-004; G03F007-029; G03F007-031; G02F001-1339

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 275798-91-9P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-Kayarad TC 110S copolymer (alkali-soluble components; transparent photoimaging materials satisfying prescribed content of **initiators** and of polymerization inhibitors for displays)

L19 ANSWER 6 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:673780 HCAPLUS

DOCUMENT NUMBER: 139:202565

TITLE: Dental adhesive compositions and their kits

INVENTOR(S): Yamamoto, Takashi; Arata, Shozo; Otsuki,

PATENT ASSIGNEE(S): Haruka  
 SOURCE: Sun Medical Co., Ltd., Japan  
 Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| JP 2003238325 | A2   | 20030827 | JP 2002-31249   | 2002<br>0207 |

PRIORITY APPLN. INFO.: JP 2002-31249  
 2002  
 0207

AB The compns., showing Vickers hardness of cured products 15-100, contain (a) acid group-containing radically polymerizable monomers 3-80, (b) polymerization initiators 0.01-30, (c) reducing agents 0.01-20, and (d) H<sub>2</sub>O 10-80 weight parts. The compns. show good adhesion to teeth and durability. 4-Methacryloyloxyethyltrimellitic anhydride 20, camphor quinone 0.5, N-phenylglycine Na salt 0.5, and H<sub>2</sub>O 17 weight parts were mixed and applied to a bovine teeth to show adhesive strength 6 MPa and surface hardness 15.

IT 583838-40-8  
 (dental adhesives containing acidic monomers, initiators, reducing agents, and H<sub>2</sub>O)

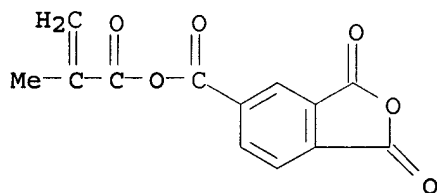
RN 583838-40-8 HCAPLUS

CN 11,14-Dioxa-2,9-diazaheptadec-16-enoic acid, 16-methyl-10,15-dioxo-12-[[[(1-oxo-2-propenyl)oxy]methyl]-, 1-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-2-[(1-oxo-2-propenyl)oxy]ethyl ester, polymer with 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylic acid anhydride with 2-methyl-2-propenoic acid, 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 161260-85-1

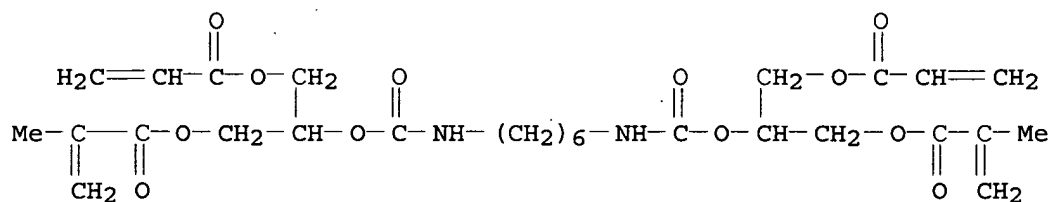
CMF C13 H8 O6



CM 2

CRN 91105-84-9

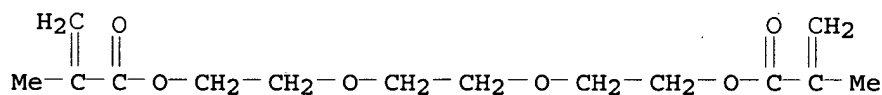
CMF C28 H40 N2 O12



CM 3

CRN 109-16-0

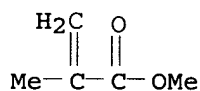
CMF C14 H22 O6



CM 4

CRN 80-62-6

CMF C5 H8 O2



IC ICM A61K006-00

ICS A61K006-083

CC 63-7 (Pharmaceuticals)

 IT 76067-46-4 583838-28-2 583838-31-7 583838-32-8 583838-34-0  
 583838-37-3 583838-38-4 **583838-40-8** 583838-42-0

 (dental adhesives containing acidic monomers, **initiators**,  
 reducing agents, and H2O)

L19 ANSWER 7 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:551351 HCAPLUS

DOCUMENT NUMBER: 139:122817

TITLE: Adhesives for dental use containing styrene derivatives

INVENTOR(S): Takeshita, Hiroshi; Ishida, Emi; Kazama, Hideki

PATENT ASSIGNEE(S): Tokuyama Corporation, Japan; Tokuyama Dental Corporation

SOURCE: PCT Int. Appl., 69 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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 WO 2003057180 A1 20030717 WO 2002-JP10412 2002  
 1007  
 W: JP, US  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,  
 IE, IT, LU, MC, NL, PT, SE, SK, TR  
 EP 1459726 A1 20040922 EP 2002-806055 2002  
 1007  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
 MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK  
 US 2004077746 A1 20040422 US 2003-467862 2003  
 0813  
 PRIORITY APPLN. INFO.: JP 2001-399569 A 2001  
 1228  
 WO 2002-JP10412 W 2002  
 1007

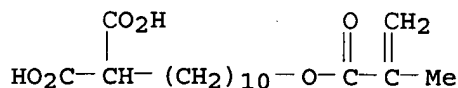
AB Disclosed are adhesives for dental use which contain a radical-polymerizable monomer containing an acidic group, a non-acidic radical-polymerizable monomer, a chemical polymerization initiator and a filler together with 2,4-diphenyl-4-methyl-1-pentene. Such an adhesive is excellent in the handling properties in case of removing excessive cement bulging out of the adhesion face upon the adhesion of a crownwork to the ebur dentis, makes it possible to appropriately control the hardening time without lowering the adhesive strength to the ebur dentis, and shows an effectively lessened change in the color tone of the hardened matter. A dental adhesive composition containing 2-methacryloyloxyethyl dihydrogen phosphate 7, bis(2-methacryloyloxyethyl dihydrogen phosphate) 13, 2-hydroxyethyl methacrylate 50, 1,6-bis(methacryloxyethoxycarbonylamino)-2,2,4-trimethylhexane 30, N,N-bis(2-hydroxyethyl)amino-p-toluidine 0.3, 2,4-diphenyl-4-methyl-1-pentene 1, benzoyl peroxide 3.5, tetraphenylboron triethanol ammonium salt 0.7, fluoroaluminosilicate glass fiber 160, and spherical silica 70 parts was formulated.

IT 561320-33-0P  
 (dental adhesives containing monomers, polymerization initiators, fillers, and styrene derivs.)

RN 561320-33-0 HCAPLUS  
 CN Propanedioic acid, [10-[(2-methyl-1-oxo-2-propenyl)oxy]decyl]-, polymer with 1,1'-(1,1-dimethyl-3-methylene-1,3-propanediyl)bis[benzene], 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

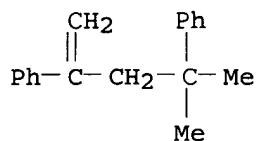
CM 1

CRN 108362-85-2  
 CMF C17 H28 O6

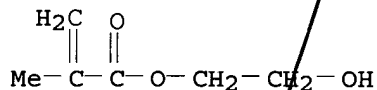




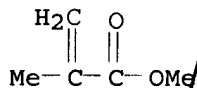
CM 2

CRN 6362-80-7  
CMF C18 H20

CM 3

CRN 868-77-9  
CMF C6 H10 O3

CM 4

CRN 80-62-6  
CMF C5 H8 O2IC ICM A61K006-00  
ICS C09J004-00

CC 63-7 (Pharmaceuticals)

IT 561320-32-9P 561320-33-0P 561320-34-1P 561320-36-3P  
561320-37-4P 561320-38-5P 561320-40-9P 561320-42-1P  
561320-43-2P 561320-44-3P 561320-45-4P 561320-46-5P(dental adhesives containing monomers, polymerization initiators  
, fillers, and styrene derivs.)REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L19 ANSWER 8 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:376870 HCAPLUS

DOCUMENT NUMBER: 138:386305

TITLE: Internally blocked organoborate initiators for  
adhesivesINVENTOR(S): Kendall, Jonathan L.; Abbey, Kirk J.;  
Righettini, Robin F.

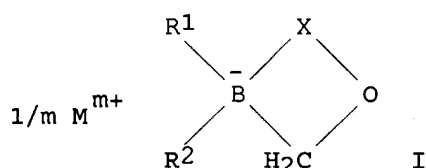
PATENT ASSIGNEE(S): Lord Corporation, USA

SOURCE: PCT Int. Appl., 50 pp.

DOCUMENT TYPE: CODEN: PIXXD2  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 English  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE              |
|--|------|----------|-----------------|-------------------|
| WO 2003040151  | A1   | 20030515 | WO 2002-US35185 | 2002<br>1101      |
| W: AU, BR, CA, MX<br>RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,<br>IE, IT, LU, MC, NL, PT, SE, SK, TR |      |          |                 |                   |
| US 2003138651  | A1   | 20030724 | US 2001-8239    | 2001<br>1106      |
| US 6630555   | B2   | 20031007 |                 |                   |
| US 2003199651  | A1   | 20031023 | US 2003-397007  | 2003<br>0325      |
| US 6646076   | B2   | 20031111 |                 |                   |
| US 2004048070  | A1   | 20040311 | US 2003-659110  | 2003<br>0909      |
| US 6841635   | B2   | 20050111 |                 |                   |
| PRIORITY APPLN. INFO.:   |      |          | US 2001-8239    | A<br>2001<br>1106 |

OTHER SOURCE(S): MARPAT 138:386305  
 GI



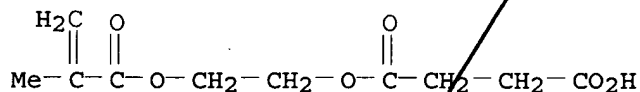
AB A method for adhesively bonding substrates comprises: (a) providing at least a first and a second substrate; (b) applying to at least one of the first and the second substrates a mixture comprising: (i) at least one addition polymerizable component; (ii) an effective amount of a borate compound I, wherein R1 and R2 are substituted or unsubstituted alkyl groups, substituted or unsubstituted aryl groups, X is O, S or CH<sub>2</sub>; G is the divalent radical (CR<sub>3</sub>R<sub>4</sub>)<sub>n</sub>, wherein R<sub>3</sub> and R<sub>4</sub> are each independently hydrogen, alkyl, aryl, a fused aromatic ring, a substituted alkyl group, or a substituted aryl group; n is from 2 to 5; M is a counter ion with charge m being greater than 0; and (iii) a deblocking agent; (c) mating the first and second substrates with the materials of step (b) therebetween; and (d) allowing the at least one addition polymerizable component to polymerize, optionally with application of heat, whereby the first and second substrates are adhesively bonding.

IT 454692-91-2P  
 (internally blocked organoborate initiators for  
 adhesives)  
 RN 454692-91-2 HCAPLUS  
 CN Butanedioic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]  
 ester, polymer with 2-ethylhexyl 2-methyl-2-propenoate and  
 (tetrahydro-2-furanyl)methyl 2-methyl-2-propenoate (9CI) (CA  
 INDEX NAME)

CM 1

CRN 20882-04-6

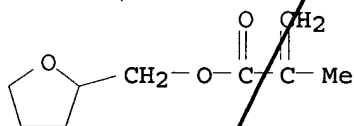
CMF C10 H14 O6



CM 2

CRN 2455-24-5

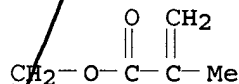
CMF C9 H14 O3



CM 3

CRN 688-84-6

CMF C12 H22 O2



Et-CH-Bu-n

IC ICM C07F005-02

ICS C09J005-00; C08F004-52

CC 37-6 (Plastics Manufacture and Processing)

IT 148894-49-9P, Methacrylic acid-tetrahydrofurfuryl Methacrylate  
 copolymer 454692-91-2P

(internally blocked organoborate initiators for  
 adhesives)

REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L19 ANSWER 9 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

USHA SHRESTHA EIC 1700 REM 4B28

ACCESSION NUMBER: 2002:778049 HCAPLUS  
 DOCUMENT NUMBER: 137:295902  
 TITLE: Curable composition containing acicular oxide particles, polymerizable substances, and photopolymerization catalyst, scratch-resistant cured product thereof, and laminated material  
 INVENTOR(S): Yamaguchi, Yoshikazu; Tanabe, Takayoshi; Nakajima, Hiroki; Takase, Hideaki  
 PATENT ASSIGNEE(S): DSM N.V., Neth.; JSR Corporation; Japan Fine Coatings Co., Ltd.  
 SOURCE: PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE              |
|--|------|----------|-----------------|-------------------|
| WO 2002079328  | A2   | 20021010 | WO 2002-NL207   | 2002<br>0329      |
| WO 2002079328  | A3   | 20021128 |                 |                   |
| W:   |      |          |                 |                   |
| AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |                   |
| RW:  |      |          |                 |                   |
| GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |      |          |                 |                   |
| JP 2002293839  | A2   | 20021009 | JP 2001-98112   | 2001<br>0330      |
| EP 1373415   | A2   | 20040102 | EP 2002-714641  | 2002<br>0329      |
| R:   |      |          |                 |                   |
| AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                 |                   |
| US 2004157972  | A1   | 20040812 | US 2004-471256  | 2004<br>0402      |
| PRIORITY APPLN. INFO.:   |      |          | JP 2001-98112   | A<br>2001<br>0330 |
|  |      |          | JP 2001-213252  | A<br>2001<br>0713 |
|  |      |          | WO 2002-NL207   | W<br>2002<br>0329 |

AB The invention relates to a curable resin composition, cured products

thereof, and laminated materials. The curable composition comprises :  
 (A-1) acicular oxide particles, the oxide being an oxide of at least one element selected from the group consisting of silicon, aluminum, zirconium, titanium, zinc, germanium, indium, tin, antimony, and cerium, (B) a compound having two or more polymerizable unsatd. groups, (c) a photopolymer. initiator is provided. After cure, the composition has excellent scratch resistance. In addition, it may have excellent antistatic characteristics and transparency. In a preferred embodiment the composition also comprises (A-2) particles other than the acicular particles (A-1), being oxide of at least one element selected from the group consisting of silicon, aluminum, zirconium, titanium, zinc, germanium, indium, tin, antimony, and cerium.

IT 469861-86-7P

(curable composition containing acicular oxide particles and polymerizable compound and a photopolymer. initiator, scratch-resistant cured product thereof, and laminated material)

RN 469861-86-7 HCAPLUS

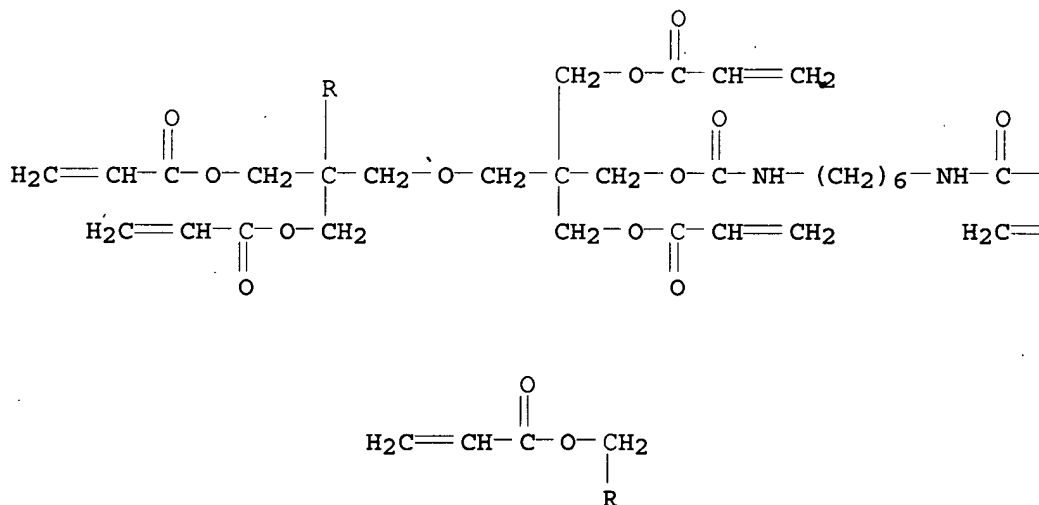
CN 11,15,19-Trioxa-2,9-diazadocos-21-enoic acid, 10,20-dioxo-13,13,17,17-tetrakis[[(1-oxo-2-propenyl)oxy]methyl]-, 3-[(1-oxo-2-propenyl)oxy]-2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]propyl ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

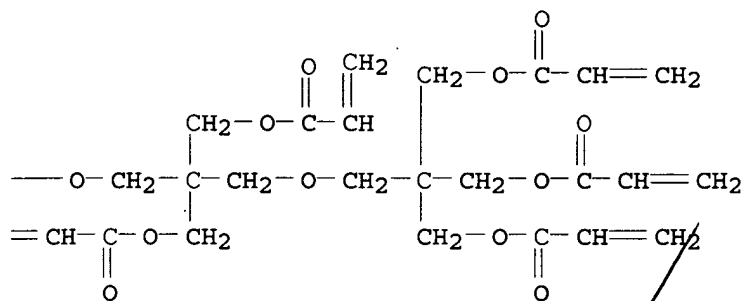
CRN 402724-36-1

CMF C58 H76 N2 O26

PAGE 1-A



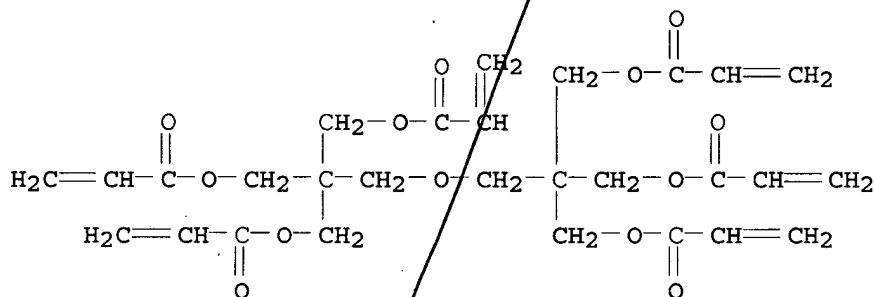
PAGE 1-B



CM 2

CRN 29570-58-9

CMF C28 H34 O13



IC ICM C09D004-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42

IT 3524-68-3DP, NK ESTER A-TMM-3L, reaction products with 3-mercaptopropyltrimethoxysilane and isophorone diisocyanate, polymerized 4098-71-9DP, Isophorone diisocyanate, reaction products with 3-mercaptopropyltrimethoxysilane and pentaerythritol triacrylate, polymerized 4420-74-ODP, 3-Mercaptopropyltrimethoxysilane, reaction products with isophorone diisocyanate and pentaerythritol triacrylate, polymerized 452083-42-OP **469861-86-7P**

(curable composition containing acicular oxide particles and polymerizable compound and a **photopolymn.**

**initiator**, scratch-resistant cured product thereof, and laminated material)

L19 ANSWER 10 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:592331 HCAPLUS

DOCUMENT NUMBER: 137:161383

TITLE: Photosensitive composition suitable for forming lithographic printing plate by CTP (computer to plate) system, and its photopolymerization method

INVENTOR(S): Murota, Yasufumi; Sorori, Tadahiro

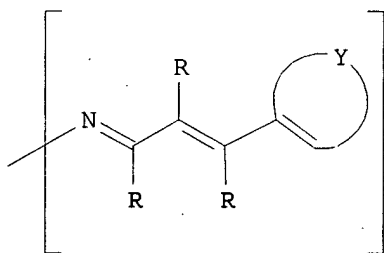
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.

DOCUMENT TYPE: CODEN: JKXXAF  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: Japanese  
 1  
 PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE         |
|------------------------|------|----------|-----------------|--------------|
| JP 2002221790          | A2   | 20020809 | JP 2001-15997   | 2001<br>0124 |
| PRIORITY APPLN. INFO.: |      |          |                 | 2001<br>0124 |

OTHER SOURCE(S): MARPAT 137:161383  
 GI



I

AB The photosensitive composition contains I [R = H, monovalent nonmetallic atomic group and may form a ring; Y = (substituted) 5- or 6-membered ring] as a sensitizing dye, a titanocene compound, and a polymerizable compound. The composition is irradiated with a laser with  $\leq 450$  nm wave length to give an image. The composition showing good storage stability and high sensitivity for laser scanning exposure can be used under yellow safe light.

IT 444903-87-1P  
 (in lithog. printing plate manufactured from photosensitive composition containing sensitizing dye and titanocene polymerization initiator)

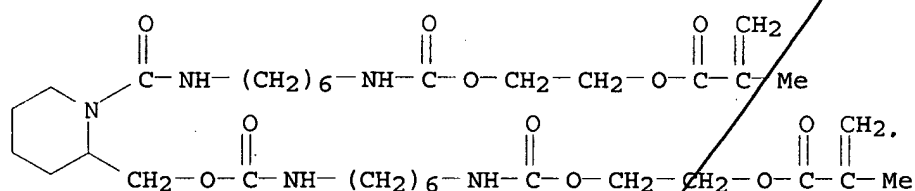
RN 444903-87-1 HCAPLUS

CN 11,14-Dioxo-2,9-diazaheptadec-16-enoic acid, 16-methyl-10,15-dioxo-, [1-(16-methyl-1,10,15-trioxo-11,14-dioxo-2,9-diazaheptadec-16-en-1-yl)-2-piperidinyl]methyl ester, polymer with 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 385843-63-0

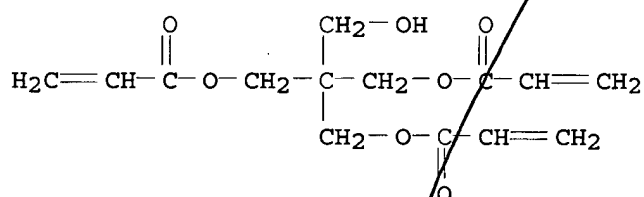
CMF C34 H57 N5 O11



CM 2

CRN 3524-68-3

CMF C14 H18 O7



IC ICM G03F007-029

ICS C08F002-50; G03F007-027; G03F007-031

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 57592-66-2P, Pentaerythritol tetraacrylate homopolymer

113506-31-3P 444903-86-0P 444903-87-1P

(in lithog. printing plate manufactured from photosensitive composition containing sensitizing dye and titanocene polymerization initiator)

L19 ANSWER 11 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:293776 HCAPLUS

DOCUMENT NUMBER: 136:327125

TITLE: Active energy-curable ink-jet inks

INVENTOR(S): Yoshihiro, Yasuo; Nakano, Kaori; Fuse, Yoshihiro

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| WO 2002031066 | A1   | 20020418 | WO 2001-JP8850  | 2001<br>1009 |

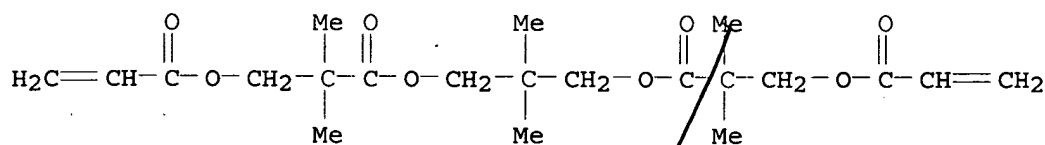
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RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

JP 2002241647 A2 20020828 JP 2001-41077



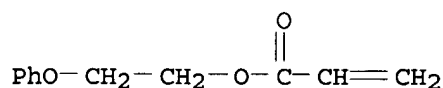
2001  
 0219  
 JP 2002187343 A2 20020702 JP 2001-300188  
 2001  
 0928  
 JP 2002188025 A2 20020705 JP 2001-300185  
 2001  
 0928  
 EP 1331251 A1 20030730 EP 2001-972720  
 2001  
 1009  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
 MC, PT, IE, FI, CY, TR  
 EP 1199181 A2 20020424 EP 2001-124162  
 2001  
 1010  
 EP 1199181 A3 20020904  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
 MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 PRIORITY APPLN. INFO.: JP 2000-308613 A  
 2000  
 1010  
 JP 2001-41077 A  
 2001  
 0219  
 WO 2001-JP8850 W  
 2001  
 1009  
 AB Title inks, which would not cause corrosion to ink-contacting  
 printing components, contain pigments,  $\geq 2$  ethylenic unsatd.  
 group-containing compds.,  $\geq 1$  ethylenic unsatd. group-containing  
 compds. with mol. weight of 90-210, 2-benzyl-2-dimethylamino-1-(4-  
 morpholinophenyl)-butanone-1 first initiator and acylphosphine  
 oxides second initiators. An ink containing Cu phthalocyanine,  
 Viscoat 192, KS-TMPTA, dispersants, Irgacure 369, and Irgacure 819  
 showed good UV curability and storage stability at 25° for  
 1 mo and no corrosion to various plastics.  
 IT 412302-84-2P, 2-Phenoxyethyl acrylate-Kayarad MANDA  
 copolymer 412302-85-3P, Acryloylmorpholine-Kayarad MANDA  
 copolymer  
 (specific initiator blend-containing UV-curable ink-jet  
 inks with no corrosion to plastic printing components)  
 RN 412302-84-2 HCAPLUS  
 CN 2-Propenoic acid, (2,2-dimethyl-1,3-propanediyl)bis[oxy(2,2-  
 dimethyl-3-oxo-3,1-propanediyl)] ester, polymer with  
 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 90780-31-7  
 CMF C21 H32 O8



CM 2

CRN 48145-04-6

CMF C11 H12 O3



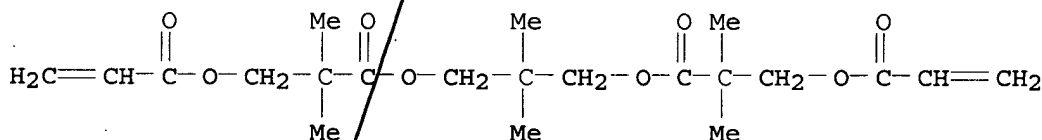
RN 412302-85-3 HCAPLUS

CN 2-Propenoic acid, (2,2-dimethyl-1,3-propanediyl)bis[oxy(2,2-dimethyl-3-oxo-3,1-propanediyl)] ester, polymer with 4-(1-oxo-2-propenyl)morpholine (9CI) (CA INDEX NAME)

CM 1

CRN 90780-31-7

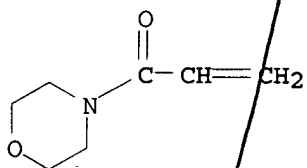
CMF C21 H32 O8



CM 2

CRN 5117-12-4

CMF C7 H11 N O2



IC ICM C09D011-00

ICS B41M005-00; B41J002-01

CC 42-12 (Coatings, Inks, and Related Products)

IT 81139-43-7P, 2-Phenoxyethyl acrylate-trimethylolpropane triacrylate copolymer 133190-24-6P, Isobornyl acrylate-1,6-hexanediol diacrylate copolymer 366781-29-5P, 1,6-Hexanediol diacrylate-ACMO copolymer 382142-91-8P,

1,6-Hexanediol diacrylate-2-phenoxyethyl acrylate-  
 trimethylolpropane triacrylate copolymer 412302-84-2P,  
 2-Phenoxyethyl acrylate-Kayarad MANDA copolymer  
 412302-85-3P, Acryloylmorpholine-Kayarad MANDA copolymer  
 (specific initiator blend-containing UV-curable ink-jet  
 inks with no corrosion to plastic printing components)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L19 ANSWER 12 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:71816 HCAPLUS

DOCUMENT NUMBER: 136:123725

TITLE: Photocurable reparative material for dental  
 use

INVENTOR(S): Satoh, Takeshi; Himeno, Masataka; Kazama,  
 Hideki

PATENT ASSIGNEE(S): Tokuyama Corporation, Japan

SOURCE: PCT Int. Appl., 68 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE              |
|--|------|----------|-----------------|-------------------|
| WO 2002005752  | A1   | 20020124 | WO 2001-JP6276  | 2001<br>0719      |
| W: JP, US  |      |          |                 |                   |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,<br>MC, NL, PT, SE, TR    |      |          |                 |                   |
| EP 1236459   | A1   | 20020904 | EP 2001-950032  | 2001<br>0719      |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,<br>MC, PT, IE, FI, CY, TR |      |          |                 |                   |
| US 2003162863  | A1   | 20030828 | US 2002-88347   | 2002<br>0318      |
| US 6849670   | B2   | 20050201 |                 |                   |
| PRIORITY APPLN. INFO.:   |      |          | JP 2000-219125  | A<br>2000<br>0719 |
|  |      |          | JP 2001-8449    | A<br>2001<br>0117 |
|  |      |          | WO 2001-JP6276  | W<br>2001<br>0719 |

OTHER SOURCE(S): MARPAT 136:123725

AB A photo-curable reparative material for dental use, which  
 comprises a polymerizable monomer, an acylphosphine oxide  
 (photopolymn. initiator) and a mixed inorg. filler, characterized  
 in that the mixed inorg. filler comprises (A) amorphous inorg.

particles having an average particle diameter of 0.1-1  $\mu\text{m}$ , (B) spherical inorg. particles having an average primary particle diameter of 0.1-5  $\mu\text{m}$ , and (C) fine inorg. particles having an average primary particle diameter of  $\leq 0.1 \mu\text{m}$  in resp. amts. such that  $\{m_A/(m_B+m_C)\}$  is 0.2-3,  $\{m_B/(m_B+m_C)\}$  is 0.5-0.99,  $\{m_C/(m_B+m_C)\}$  is 0.01-0.5, wherein  $m_A$ ,  $m_B$  and  $m_C$  represent the masses of (A), (B) and (C), resp. The reparative material has good operability and exhibits high fracture toughness and good surface lubricity when cured. A dental material was prepared from a filler composition containing (A)  $\gamma$ -methacryloxypropyltrimethoxysilane-treated silica-zirconia particles having an average particle diameter of 0.8  $\mu\text{m}$ , (B)  $\gamma$ -methacryloxypropyltrimethoxysilane-treated spherical silica-zirconia particle having an average particle diameter of 0.52  $\mu\text{m}$ , and (C)  $\gamma$ -methacryloxypropyltrimethoxysilane-treated spherical silica-titania particle having an average particle diameter of 0.08  $\mu\text{m}$  with a weight ratio  $m_A/(m_B + m_C) = 1$ , polymerizable monomers including bismethacryloylethoxyphenylpropane, triethylene glycol dimethacrylate, and 1,6-bis(methacryloxyethylcarbonylamino)-2,2,4-trimethylhexane, and a photopolymer. initiator bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide.

IT 391226-43-0

(photocurable reparative dental material containing monomers and photopolymer. initiators and inorg. fillers with specified size and weight ratio)

RN 391226-43-0 HCAPLUS

CN 11,14-Dioxo-2,9-diazaheptadec-16-enoic acid, 4,4,6,16-tetramethyl-10,15-dioxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and  $\alpha, \alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

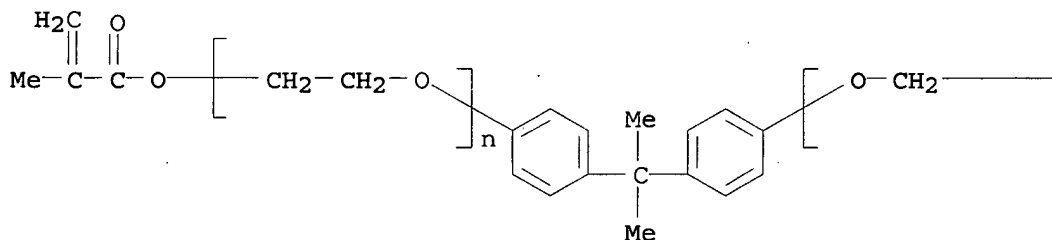
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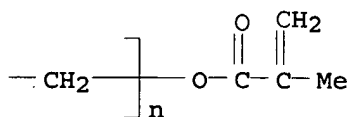
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PAGE 1-A



PAGE 1-B

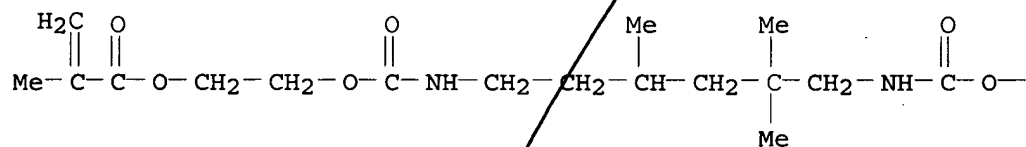


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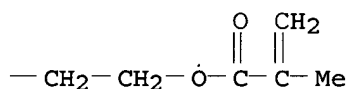
CRN 41137-60-4

CMF C23 H38 N2 O8

PAGE 1-A



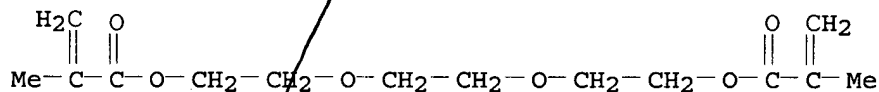
PAGE 1-B



CM 3

CRN 109-16-0

CMF C14 H22 O6



IC ICM A61K006-08

CC 63-7 (Pharmaceuticals)

IT 391226-43/0

(photocurable reparative dental material containing monomers and photopolymn. initiators and inorg. fillers with specified size and weight ratio)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L19 ANSWER 13 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:36796 HCAPLUS

DOCUMENT NUMBER: 137:33581

TITLE: Macro-azo-initiators having cinnamate end groups: synthesis, characterization and photopolymerization with 2-hydroxyethyl methacrylate

AUTHOR(S) : Jantas, Roman; Wodka, Tadeusz; Janowska, Grazyna

CORPORATE SOURCE: Dep. of Phys. Chem. of Polymers, Tech. Univ.  
of Lodz, Lodz, 90-924, Pol.

SOURCE: Polimery (Warsaw, Poland) (2001), 46(11-12), 812-816

PUBLISHER: CODEN: POLIA4; ISSN: 0032-2725  
 Instytut Chemii Przemysłowej  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Three macro-azo-initiators (MAI, Mn = 1583, 4520, 8427) prepared (after [10]) by reacting poly(ethylene oxide) (PEO, Mn = 600, 2000, and 4000) with AIBN (2:1 by mole), were modified by esterification with cinnamoyl chloride to replace the original hydroxyl end-groups by the cinnamate end-groups. The MAI were used as initiators (2-10 weight % based on monomer weight) in photoinitiated (UV quartz tube, 37.5 W, distance 20 cm) polymerization of 2-hydroxyethyl methacrylate (HEMA) coupled with photocrosslinking (Scheme I). The structures suggested for the MAI oligomers were confirmed in terms of FTIR and <sup>1</sup>H-NMR spectra (Figs. 1, 2). Photocrosslinking was monitored at 282 nm; as the irradiation time was protracted, the absorbance fell (Fig. 3). For the three MAI examined, crosslinking percentage was studied in relation to irradiation time; crosslinking rates were highest within the first 2-4 min (Fig. 4); in 20 min, the cinnamate groups participated in 77-82% in the crosslinking (Fig. 4). The conversion of photosensitive groups (-CH=CH-) was not related to the M of MAI. A DSC thermogram for MAI-2000 (Fig. 5) exhibited an endotherm at 54°C (melting of PEO crystal phase) and a broad exotherm at 90-137° (decomposition of azo groups). Photocrosslinked PHEMA prepared with MAI-2000 having cinnamate end-groups attained the equilibrium degree of swelling (in deionized H<sub>2</sub>O) in 20 h (Fig. 6). The swelling degree rose as the amount of MAI used was raised, presumably on account of the rising content of polyoxide segments; it also rose as the M<sub>n</sub> of the modified MAI was increased (Fig. 7).

IT 436099-02-4P

(macro-azo-initiators having cinnamate end groups: synthesis, characterization and photopolymerization with 2-hydroxyethyl methacrylate)

RN 436099-02-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with α,α'-[azobis(2,2-dimethyl-1-oxo-2,1-ethanediyl)]bis[ω-[(1-oxo-3-phenyl-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

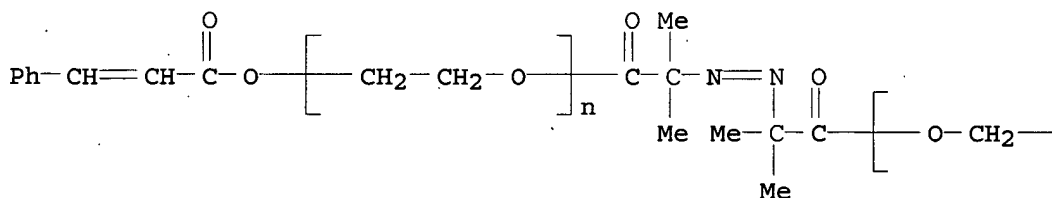
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CRN 436099-01-3

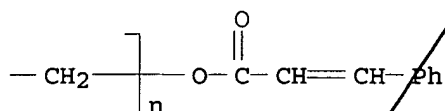
CMF (C<sub>2</sub> H<sub>4</sub> O)<sub>n</sub> (C<sub>2</sub> H<sub>4</sub> O)<sub>n</sub> C<sub>26</sub> H<sub>26</sub> N<sub>2</sub> O<sub>6</sub>

CCI PMS

PAGE 1-A



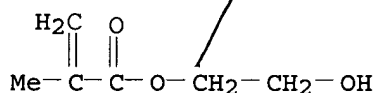
PAGE 1-B



CM 2

CRN 868-77-9

CMF C6 H10 O3



CC 35-4 (Chemistry of Synthetic High Polymers)

IT 436099-02-4P 436099-03-5P

(macro-azo-initiators having cinnamate end groups:  
synthesis, characterization and photopolymerization with  
2-hydroxyethyl methacrylate)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L19 ANSWER 14 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:847637 HCAPLUS

DOCUMENT NUMBER: 136:12954

TITLE: Photosensitive polymer compositions, spacers,  
and liquid crystal display devices

INVENTOR(S): Itami, Setsuo; Mitani, Kiyoki

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| JP 2001324809 | A2   | 20011122 | JP 2001-64289   | 2001<br>0308 |

PRIORITY APPLN. INFO.:

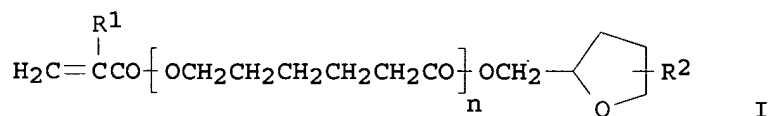
JP 2000-63856 A

2000  
0308

JP 2000-63857 A

2000  
0308

OTHER SOURCE(S): MARPAT 136:12954  
GI



AB The compns. contain (A) alkaline-soluble polymers, (B) ethylenically unsatd. compds., (C) benzophenone-containing organic peroxide photopolymn. initiator (preferable Markush given), and (D) 4,4'-bis(dialkylamino)benzophenone photosensitizers. Alkaline-soluble polymers may be copolymers of unsatd. carboxylic acid monomers with I (R<sup>1</sup> = H, Me; R<sup>2</sup> = H, C1-5 alkyl; n = integer of 0-5) and optionally other radically polymerizable monomers. Spacers for liquid crystal displays made of the compns. and liquid crystal displays equipped with the spacers are also claimed. Solvent-resistant spacers having high sensitivity are formed under excellent developing conditions, without generation of scums.

IT 275798-91-9 278599-99-8  
(alkaline-soluble polymer; photosensitive alkaline-soluble polymer compns. containing benzophenone **initiators** and bis(dialkylamino)benzophenone photosensitizers for spacers in liquid crystal display devices)

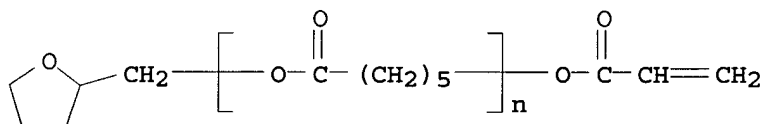
RN 275798-91-9 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, phenylmethyl 2-methyl-2-propenoate and α-[(tetrahydro-2-furanyl)methyl]-ω-[(1-oxo-2-propenyl)oxy]poly[oxy(1-oxo-1,6-hexanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 87320-06-7

CMF (C6 H10 O2)<sub>n</sub> C8 H12 O3

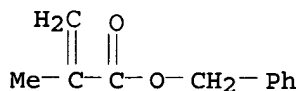
CCI PMS



CM 2

CRN 2495-37-6

CMF C11 H12 O2

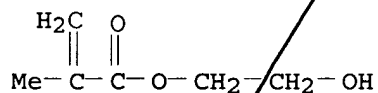




CM 3

CRN 868-77-9

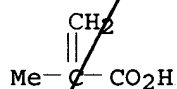
CMF C6 H10 O3



CM 4

CRN 79-41-4

CMF C4 H6 O2



RM 278599-99-8 HCAPLUS

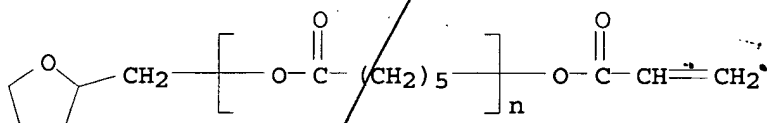
CN 2-Propenoic acid, 2-methyl-, polymer with phenylmethyl  
 2-methyl-2-propenoate and  $\alpha$ -[(tetrahydro-2-furanyl)methyl]-  
 $\omega$ -[(1-oxo-2-propenyl)oxy]poly[oxy(1-oxo-1,6-hexanediyl)]  
 (9CI) (CA INDEX NAME)

CM 1

CRN 87320-06-7

CMF (C6 H10 O2)<sub>n</sub> C8 H12 O3

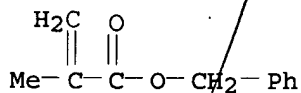
CCI PMS



CM 2

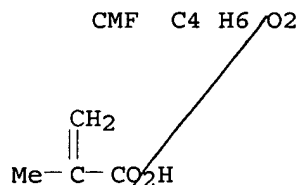
CRN 2495-37-6

CMF C11 H12 O2



CM 3

CRN 79-41-4



IC ICM G03F007-033  
 ICS C08F002-44; C08F002-50; C08F265-02; C08F265-06; G03F007-027;  
 G03F007-031; G03F007-038  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 35, 38  
 IT 141655-30-3, Benzyl methacrylate-2-hydroxyethyl  
 methacrylate-methacrylic acid copolymer 191545-17-2, Benzyl  
 methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl  
 methacrylate copolymer 275798-91-9 278599-99-8  
 374723-37-2  
 (alkaline-soluble polymer; photosensitive alkaline-soluble polymer compns.  
 containing benzophenone **initiators** and  
 bis(dialkylamino)benzophenone photosensitizers for spacers in  
 liquid crystal display devices)

L19 ANSWER 15 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:754063 HCAPLUS  
 DOCUMENT NUMBER: 135:308950  
 TITLE: Polymerizable compositions, composites fillers  
 from the compositions, and dental  
 polymerizable compositions containing the  
 fillers  
 INVENTOR(S): Kozato, Tatsuya; Saimi, Yasukazu; Asai,  
 Masayuki  
 PATENT ASSIGNEE(S): Sun Medical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE              |
|------------------------|------|----------|-----------------|-------------------|
| JP 2001288232          | A2   | 20011016 | JP 2001-2031    | 2001<br>0110      |
| PRIORITY APPLN. INFO.: |      |          | JP 2000-27596   | A<br>2000<br>0204 |

AB The polymerizable compns. contain (A) (meth)acrylate monomers  
 having  $\geq 3$  ethylenically unsatd. groups 100, (B) polyester  
 di(meth)acrylates having ethylenically unsatd. group 5-900, (C)  
 polymerization initiators 0.01-5, and optionally (D) inorg. fillers  
 10-900 parts. The composite fillers are manufactured by pulverizing  
 polymers prepared by curing the above compns. The dental  
 polymerizable compns. contain (E) polymerizable monomers, (C)  
 polymn initiators, the above composite fillers, and optionally (D)  
 inorg. fillers. The dental compns. provide cured products having

good mech. strength and are useful for restorative materials, prosthetics, sealants, etc.

IT 179331-44-3P 365973-04-2P 365973-05-3P

(dental polymerizable comps. containing monomers, polymerization initiators, and composite fillers)

RN 179331-44-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediylbis(oxy-2,1-ethanediyl) ester, polymer with 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahehexadecane-1,16-diyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

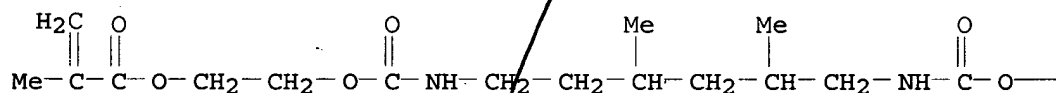
CM 1

CRN 72869-86-4

CMF C23 H38 N2 O8

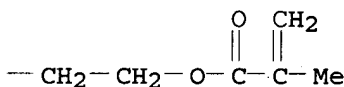
CCI IDS

PAGE 1-A



D1-Me

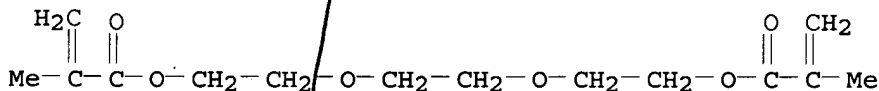
PAGE 1-B



CM 2

CRN 109-16-0

CMF C14 H22 O6



RN 365973-04-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with  $\alpha$ -hydro- $\omega$ -[(1-oxo-2-propenyl)oxy] [poly[oxy(1-oxo-1,6-hexanediyl)]] diester with 3-hydroxy-2,2-dimethylpropyl 3-hydroxy-2,2-dimethylpropanoate (9CI) (CA INDEX NAME)

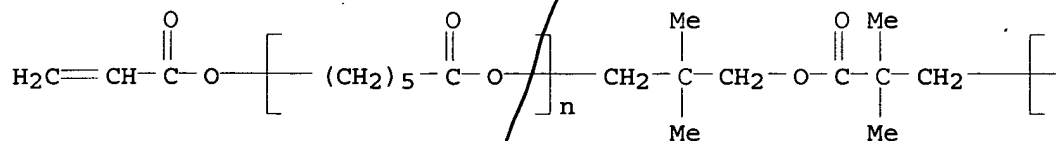
CM 1

CRN 102903-35-5

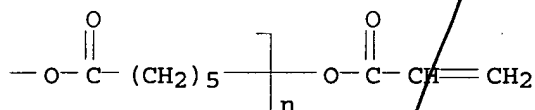
CMF (C6 H10 O2)n (C6 H10 O2)n C16 H24 O6

CCI PMS

PAGE 1-A



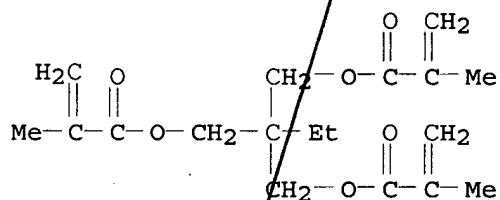
PAGE 1-B



CM 2

CRN 3290-92-4

CMF C18 H26 O6



RN 365973-05-~~3~~ HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[2,2-bis[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl ester, polymer with  $\alpha$ -hydro- $\omega$ -[(1-oxo-2-propenyl)oxy] [poly[oxy(1-oxo-1,6-hexanediyl)]] diester with 3-hydroxy-2,2-dimethylpropyl 3-hydroxy-2,2-dimethylpropanoate (9CI) (CA INDEX NAME)

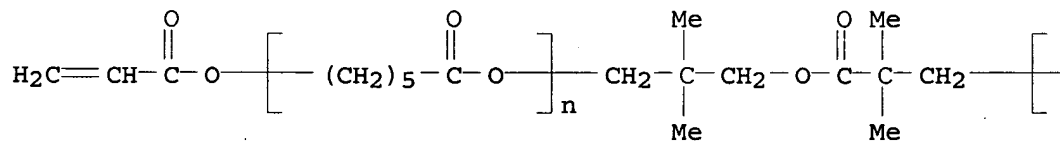
CM 1

CRN 102903-35-5

CMF (C6 H10 O2)<sub>n</sub> (C6 H10 O2)<sub>n</sub> C16 H24 O6

CCI      PMS

PAGE 1-A

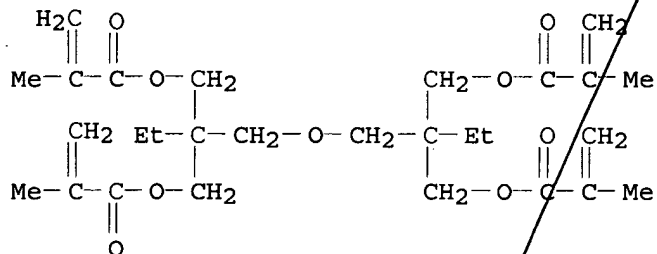




CM 2

CRN 52733-11-6

CMF C28 H42 O9



RN 365973-03-1 HCAPLUS

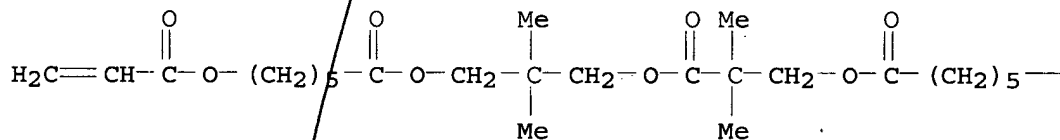
CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 3-[2,2-dimethyl-1-oxo-3-[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]propoxy]-2,2-dimethylpropyl ester, polymer with 2-ethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

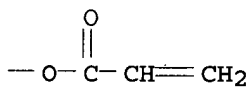
CRN 91381-58-7

CMF C28 H44 O10

PAGE 1-A



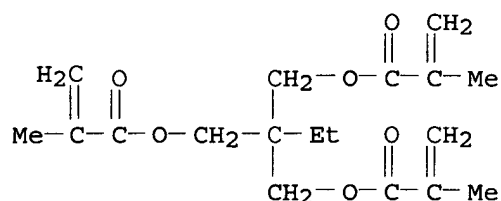
PAGE 1-B



CM 2

CRN 3290-92-4

CMF C18 H26 O6



IC ICM C08F290-06  
ICS A61K006-083  
CC 63-7 (Pharmaceuticals)  
Section cross-reference(s): 38  
IT 179331-44-3P 365973-04-2P 365973-05-3P  
366789-90-4P  
(dental polymerizable compns. containing monomers, polymerization  
**initiators**, and composite fillers)  
IT 365973-02-0P 365973-03-1P  
(dental polymerizable compns. containing monomers, polymerization  
**initiators**, and composite fillers)

L19 ANSWER 16 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:718132 HCAPLUS

DOCUMENT NUMBER: 135:277779

TITLE: Transparent coating compositions for bleached  
teeth

INVENTOR(S): Kawahara, Haruyuki; Makita, Teruo; Yasuda,  
Norimoto; Oshima, Kentaro; Kawahara, Hiroshi;  
Nakai, Hiromasa

PATENT ASSIGNEE(S): Kansai Research Institute Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| JP 2001271009 | A2   | 20011002 | JP 2000-86336   | 2000<br>0327 |

PRIORITY APPLN. INFO.:

JP 2000-86336

2000  
0327

AB The invention relates to a polymeric coating composition for use as finishing coating to the teeth after bleaching treatment for prevention of discoloration, wherein the coating composition contains polyfunctional acrylate monomer 10-80, low-boiling-point solvent 20-80, and visible light polymerization initiator 0.4-5 %. A coating composition containing trimethylolpropane trimethacrylate 60, Me methacrylate 40, camphorquinone 2 parts was formulated, and applied on a H2O2-treated tooth.

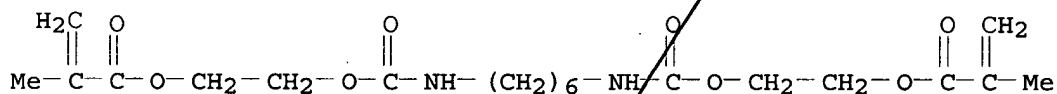
IT 363599-93-3P 363599-95-5P

(transparent coating compns. for bleached teeth containing acrylate monomers and low-boiling-point solvents and visible light polymerization **initiators**)

RN 363599-93-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester,  
 polymer with methyl 2-methyl-2-propenoate and trimethyl-4,13-dioxo-  
 3,14-dioxa-5,12-diazahehexadecane-1,16-diyl bis(2-methyl-2-  
 propenoate) (9CI) (CA INDEX NAME)

CM 1

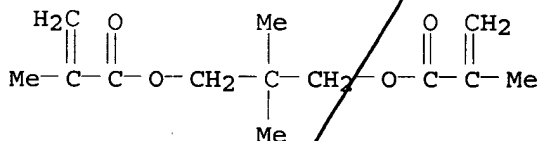
CRN 65256-52-2  
 CMF C23 H38 N2 O8  
 CCI IDS



3 ( D1-Me )

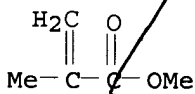
CM 2

CRN 1985-51-9  
 CMF C13 H20 O4



CM 3

CRN 80-62-6  
 CMF C5 H8 O2



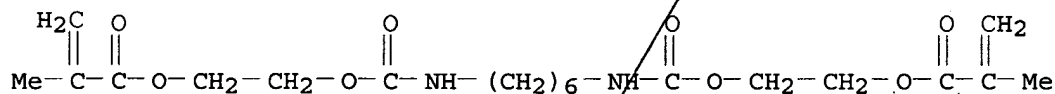
RN 363599-95-5 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester,  
 polymer with 2-[(diphenoxyphosphinyl)oxy]ethyl  
 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and  
 trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahehexadecane-1,16-diyl  
 bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 65256-52-2  
 CMF C23 H38 N2 O8



CCI IDS

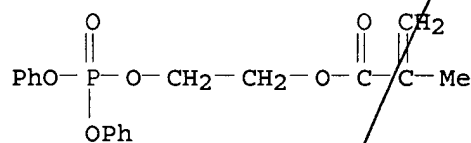


3 ( D1-Me )

CM 2

CRN 16069-23-1

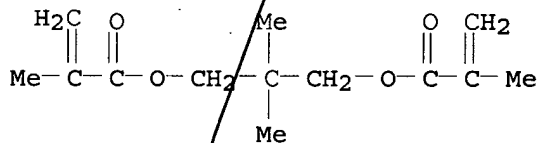
CMF C18 H19 O6 P



CM 3

CRN 1985-51-9

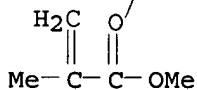
CMF C13 H20 O4



CM 4

CRN 80-62-6

CMF C5 H8 O2



IC ICM C09D004-02

ICS A61K006-00; A61K006-083; C08F002-50

CC 62-7 (Essential Oils and Cosmetics)

Section cross-reference(s): 63

IT 28931-67-1P, Methyl methacrylate-trimethylolpropane

trimethacrylate copolymer 138322-06-2P 363599-91-1P

363599-92-2P 363599-93-3P 363599-94-4P

363599-95-5P

(transparent coating compns. for bleached teeth containing acrylate monomers and low-boiling-point solvents and visible light polymerization initiators)

L19 ANSWER 17 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:693446 HCAPLUS

DOCUMENT NUMBER: 135:258154

TITLE: Organoborane polymerization initiator systems  
and bonding compositions comprising vinyl  
aromatic compounds

INVENTOR(S): Moren, Dean M.

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: PCT Int. Appl., 68 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE              |
|---|------|----------|-----------------|-------------------|
| WO 2001068783   | A2   | 20010920 | WO 2001-US4752  | 2001<br>0214      |
| WO 2001068783   | A3   | 20020221 |                 |                   |
| W: BR, CN, JP   |      |          |                 |                   |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR    |      |          |                 |                   |
| US 6479602  | B1   | 20021112 | US 2000-525368  | 2000<br>0315      |
| EP 1263907  | A2   | 20021211 | EP 2001-910679  | 2001<br>0214      |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR |      |          |                 |                   |
| BR 2001009243   | A    | 20021224 | BR 2001-9243    | 2001<br>0214      |
| JP 2003526729   | T2   | 20030909 | JP 2001-567270  | 2001<br>0214      |
| PRIORITY APPLN. INFO.:  |      |          | US 2000-525368  | A<br>2000<br>0315 |
|   |      |          | WO 2001-US4752  | W<br>2001<br>0214 |

AB Polymerization initiator systems comprise an organoborane and a vinyl aromatic compound carrier and reactant. The polymerization initiator systems are particularly useful in formulating 2-part curable bonding compns., particularly those that cure to acrylic adhesives, more particularly those that cure to acrylic adhesives capable of bonding to low surface energy substrates. Also, bonding compns. comprising an organoborane,  $\geq 1$  polymerizable monomer, and  $\geq 1$  vinyl aromatic compound A bonding composition containing reactive

monomers CN 972 5, tetrahydrofurfuryl methacrylate 195, 2-ethylhexyl methacrylate 65, 4-tert-butylstyrene 25, NKEster SA 21.25, decomplexer anhydride 3.75 g, organoborane-amine catalyst, and impact modifier, was cured 2 h and showed T peel strength (to HDPE) 47.1 N/cm.

IT 361534-25-0P 361534-27-2P

(organoborane polymerization initiator systems and adhesives comprising reactive vinyl aromatic carriers for bonding to low-surface-energy plastics)

RN 361534-25-0 HCAPLUS

CN Butanedioic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 2-ethylhexyl 2-methyl-2-propenoate,  $\alpha$ -[methyl-2-[[[[[3-(1-methylethenyl)phenyl]methyl]amino]carbonyl]amino]ethyl]- $\omega$ -[methyl-2-[[[[[3-(1-methylethenyl)phenyl]methyl]amino]carbonyl]amino]ethoxy]poly[oxy(methyl-1,2-ethanediyl)] and (tetrahydro-2-furanyl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

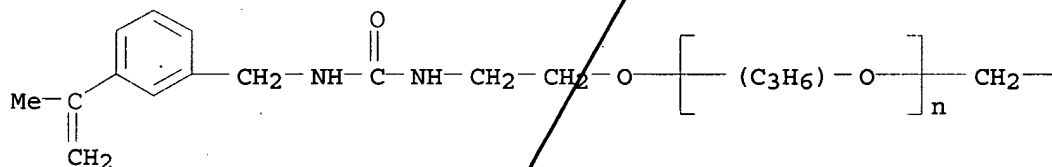
CM 1

CRN 361534-24-9

CMF (C3 H6 O)<sub>n</sub> C28 H38 N4 O3

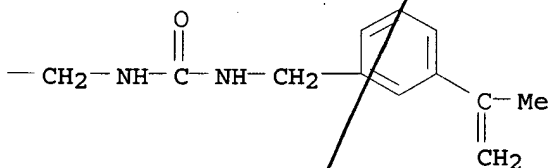
CCI IDS, PMS

PAGE 1-A



2 (D1-Me)

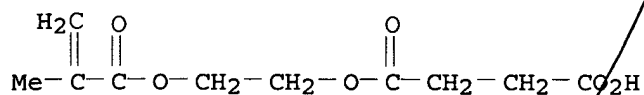
PAGE 1-B



CM 2

CRN 20882-04-6

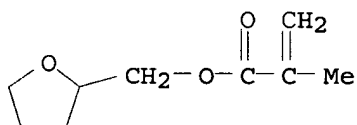
CMF C10 H14 O6



CM 3

CRN 2455-24-5

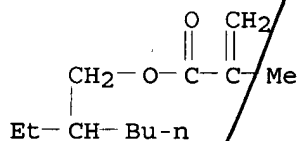
CMF C9 H14 O3



CM 4

CRN 688-84-6

CMF C12 H22 O2



RN 361534-27-2 HCAPLUS

CN Butanedioic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 2-ethylhexyl 2-methyl-2-propenoate,  $\alpha, \alpha', \alpha''$ -1,2,3-propanetriyltris[ $\omega$ -[methyl-2-[[[[[3-(1-methylethenyl)phenyl]methyl]amino]carbonyl]amino]ethoxy]poly[oxy(methyl-1,2-ethanediyl)]] and (tetrahydro-2-furanyl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

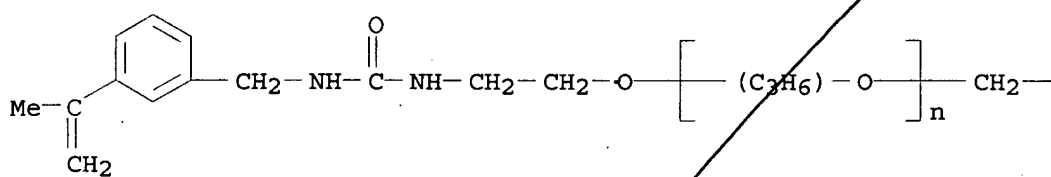
CM 1

CRN 361534-26-1

CMF (C3 H6 O)<sub>n</sub> (C3 H6 O)<sub>n</sub> (C3 H6 O)<sub>n</sub> C45 H62 N6 O6

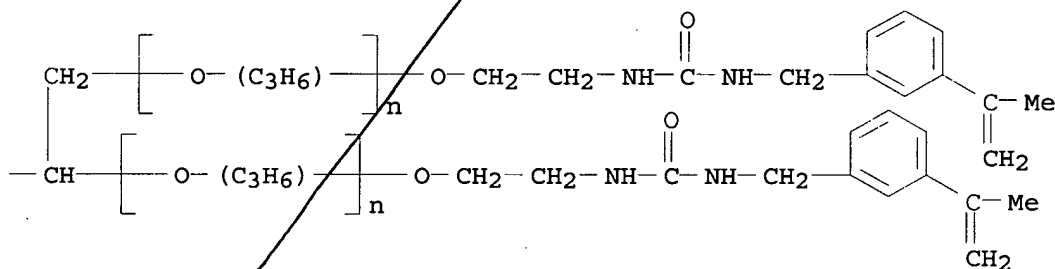
CCI IDS, PMS

PAGE 1-A



3 (D1-Me)

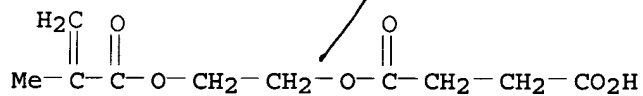
PAGE 1-B



CM 2

CRN 20882-04-6

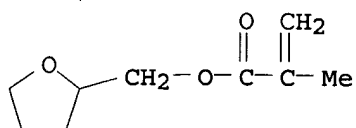
CMF C10 H14 O6



CM 3

CRN 2455-24-5

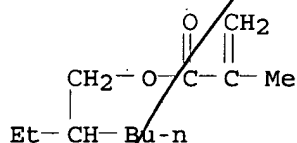
CMF C9 H14 O3



CM 4

CRN 688-84-6

CMF C12 H22 O2



IC ICM C09J004-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 35

IT 103-11-7DP, 2-Ethylhexyl acrylate, reaction products with TMI adducts 2094-99-7DP, TMI, reaction products with polyalkylene polyamine and unsatd. monomers 2455-24-5DP, Tetrahydrofurfuryl methacrylate, reaction products with TMI adducts 20882-04-6DP, NKEster SA, reaction products with TMI adducts 60506-81-2DP, SR 399, reaction products with TMI adducts 65605-36-9DP, Jeffamine ED 600, reaction products with isopropenyl dimethylbenzylisocyanate and unsatd. monomers 83713-01-3DP, Jeffamine M 2005, reaction products with isopropenyl dimethylbenzylisocyanate and unsatd. monomers 361202-06-4P 361202-07-5P 361202-08-6P 361202-09-7P 361202-10-0P 361202-11-1P **361534-25-0P 361534-27-2P** 361534-28-3P

(organoborane polymerization **initiator** systems and adhesives comprising reactive vinyl aromatic carriers for bonding to low-surface-energy plastics)

L19 ANSWER 18 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:250388 HCAPLUS

DOCUMENT NUMBER: 135:242556

TITLE: Synthesis, characterisation and crosslinking properties of macro-azo-initiators

AUTHOR(S): Jantas, R.; Wodka, T.

CORPORATE SOURCE: Department of Physical Chemistry of Polymers, Technical University of Lodz, Lodz, 90-543, Pol.

SOURCE: Fibres &amp; Textiles in Eastern Europe (2000), 8(4), 71-73

CODEN: FTEEEM; ISSN: 1230-3666

PUBLISHER: Institute of Chemical Fibres

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Macro-azo-initiators (MAIs) containing poly(ethylene oxide) (PEO) units were modified by esterification of their hydroxyl end groups with (meth)acryloyl chloride. Modified MAIs were used to initiate the polymerization of 2-hydroxyethyl methacrylate (HEMA) with crosslinking. The effect of the amount and mol. weight of modified MAIs on the water absorption of poly(2-hydroxyethyl methacrylate) hydrogels prepared with their use were determined

IT **360560-12-9P 360560-13-0P**

(synthesis and crosslinking properties of (meth)acrylate-terminated poly(ethylene oxide) macro-azo-**initiators**)

polymerized with hydroxyethyl methacrylate)

RN 360560-12-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
 $\alpha, \alpha'$ -[azobis(2,2-dimethyl-1-oxo-2,1-ethanediyl)]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

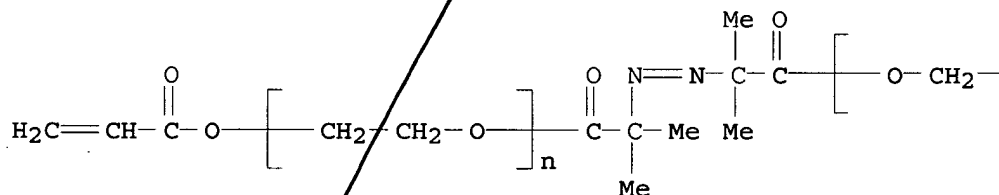
CM 1

CRN 360560-10-7

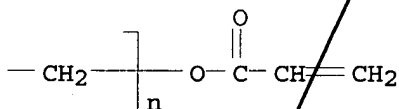
CMF (C2 H4 O)n (C2 H4 O)n C14 H18 N2 O6

CCI PMS

PAGE 1-A



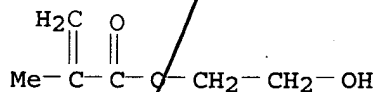
PAGE 1-B



CM 2

CRN 868-77-9

CMF C6 H10 O3



RN 360560-13-0 HCAPLUS

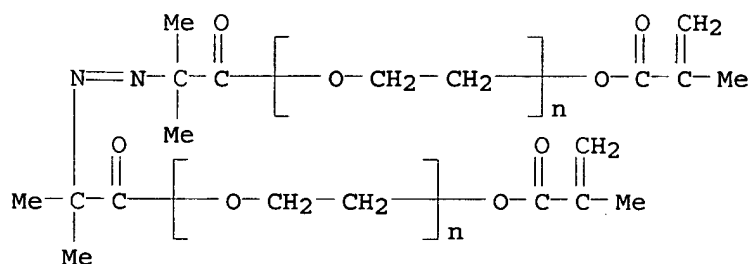
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
 $\alpha, \alpha'$ -[azobis(2,2-dimethyl-1-oxo-2,1-ethanediyl)]bis[ $\omega$ -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 360560-11-8

CMF (C2 H4 O)n (C2 H4 O)n C16 H22 N2 O6

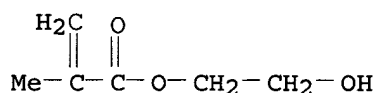
CCI PMS



CM 2

CRN 868-77-9

CMF C6 H10 O3



CC 35-4 (Chemistry of Synthetic High Polymers)

IT 360560-12-9P 360560-13-0P

(synthesis and crosslinking properties of (meth)acrylate-terminated poly(ethylene oxide) macro-azo-initiators polymerized with hydroxyethyl methacrylate)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 19 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:631910 HCAPLUS

DOCUMENT NUMBER: 133:209338

TITLE: Photopolymerization initiators, photocurable resin compositions, moldings coated with the compositions, and method for yellowing prevention

INVENTOR(S): Fujita, Makoto

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE      |
|---------------|------|----------|-----------------|-----------|
| JP 2000248012 | A2   | 20000912 | JP 1999-50314   | 1999 0226 |

1999

0226

PRIORITY APPLN. INFO.: JP 1999-50314

1999

0226

AB The initiators comprise hydroxy(lower alkyl)phenones and



1,1-di(lower alkoxy)-1,2-diphenylethanes. The compns. are useful for coatings for digital versatile disks, compact disks, etc. A composition comprising bisphenol A diglycidyl ether diacrylate 10, polyethylene glycol diacrylate 10, neopentyl glycol hydroxypivalic acid diacrylate 70, ethylene oxide-modified phosphoric acid dimethacrylate 0.2, Irgacure 184 10, and Irgacure 651 1.5 parts were applied on a polycarbonate optical disk substrate and cured by UV irradiation to give a coating showing yellowing index <3.0 and no stickiness.

IT 290832-67-6P

(photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks)

RN 290832-67-6 HCAPLUS

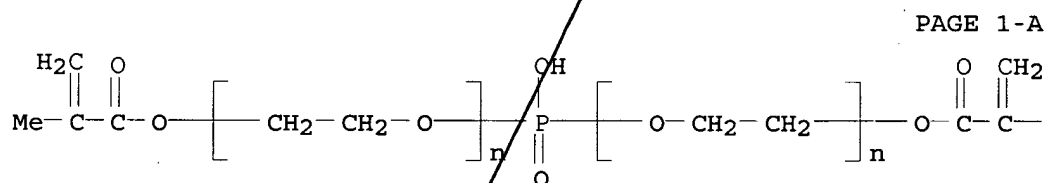
CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 3-[2,2-dimethyl-1-oxo-3-[(1-oxo-2-propenyl)oxy]propoxy]-2,2-dimethylpropyl 2-propenoate,  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and  $\alpha,\alpha'$ -phosphinobis[ $\omega$ -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 72829-36-8

CMF (C2 H4 O)n (C2 H4 O)n C8 H11 O6 P

CCI PMS



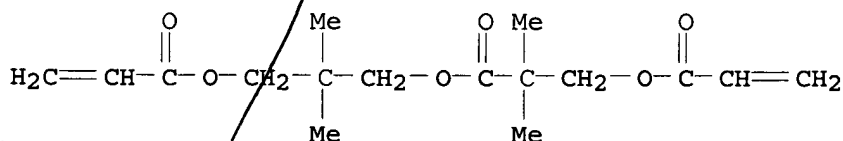
PAGE 1-B

— Me

CM 2

CRN 30145-51-8

CMF C16 H24 O6

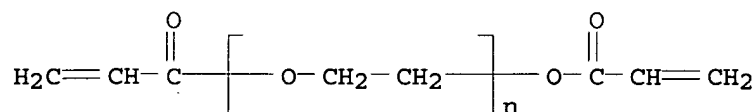


CM 3

CRN 26570-48-9

CMF (C2 H4 O)<sub>n</sub> C6 H6 O3

CCI PMS

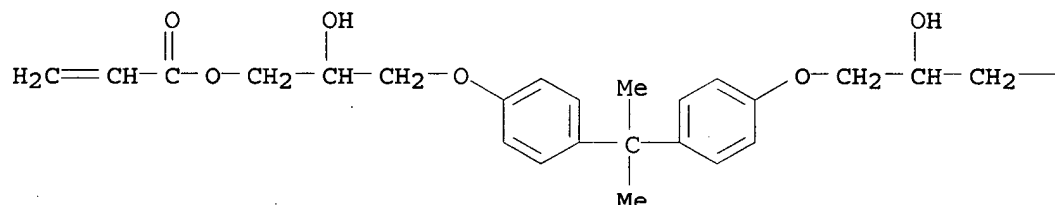


CM 4

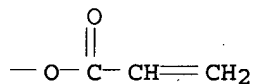
CRN 4687-94-9

CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



IC ICM C08F002-50

ICS C08F020-10; C08F290-00; C08J007-04; C09D004-00

CC 42-3 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35, 38, 67, 74

IT 290832-67-6P

(photopolymer. initiators for photocurable coatings with reduced yellowing for optical disks)

L19 ANSWER 20 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:452610 HCAPLUS

DOCUMENT NUMBER: 133:96816

TITLE: Photopolymerizable composition, photoimaging material, and presensitized lithographic plate using it

INVENTOR(S): Hino, Etsuko; Urano, Toshiyoshi; Nagao, Takumi

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

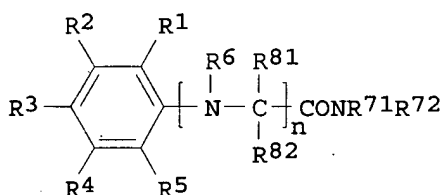
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

| PATENT NO.             | KIND | DATE             | APPLICATION NO. | DATE         |
|------------------------|------|------------------|-----------------|--------------|
| JP 2000187323          | A2   | 20000704         | JP 1998-366565  | 1998<br>1224 |
| PRIORITY APPLN. INFO.: |      |                  | JP 1998-366565  | 1998<br>1224 |
| OTHER SOURCE(S):       |      | MARPAT 133:96816 |                 |              |
| GI                     |      |                  |                 |              |



AB The composition comprises (a) an ethylenically unsatd. monomer, (b) a photopolymer. initiator containing  $\geq 1$  radical activator and  $\geq 1$  aromatic amide I ( $n = 2-10$ ;  $R1-5 = H$ , alkyl, aryl, aromatic heterocycle, alkoxy, acyl, alkoxy carbonyl,  $CO_2H$ ,  $CN$ , alkenyl, aryloxy, acryloyloxy, halo, formyl, alkylcarbonyloxy,  $NO_2$ ,  $SO_3H$ , alkylthio, alkylsulfonyl, phenylsulfonyl, amino, amide;  $R6 = H$ , alkyl which may be substituted with alkenyl, aryl, alkoxy aromatic heterocycle, or  $OH$ ;  $R71, R72 = H$ , alkyl, aryl, aromatic heterocycle, alkenyl, acryloyl;  $R81, R82 = H$ , alkyl, halo,  $OH$ ) and/or its condensate., and (c) a polymer binder. The image-forming material comprises a substrate successively coated with the above photosensitive composition layer and an O-shielding layer. The presensitized lithog. plate has the above photosensitive composition layer on an Al support which is successively coarsened, anodized in a  $H_2SO_4$ -containing electrolytic solution, and optionally hydrophilized. The composition shows high photosensitivity, solubility in solvents, developability, and storage stability.

IT 280569-05-3P

(photopolymerizable composition containing aromatic amide photopolymer. initiator for photoimaging material and presensitized lithog. plate)

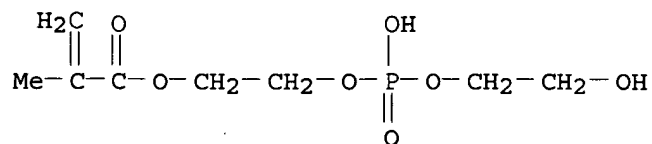
RN 280569-05-3 HCAPLUS

CN 11,15-Dioxa-2,9-diazaoctadec-17-enoic acid, 10,16-dioxo-13,13-bis[[[(1-oxo-2-propenyl)oxy]methyl]-, 3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propyl ester, polymer with [(2-hydroxyethoxy)phosphinylidene]bis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), 2-[[hydroxy(2-hydroxyethoxy)phosphinyl]oxy]ethyl 2-methyl-2-propenoate and (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 280569-04-2

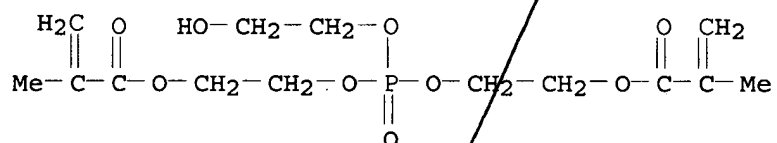
CMF C8 H15 O7 P



CM 2

CRN 280569-03-1

CMF C14 H23 O9 P

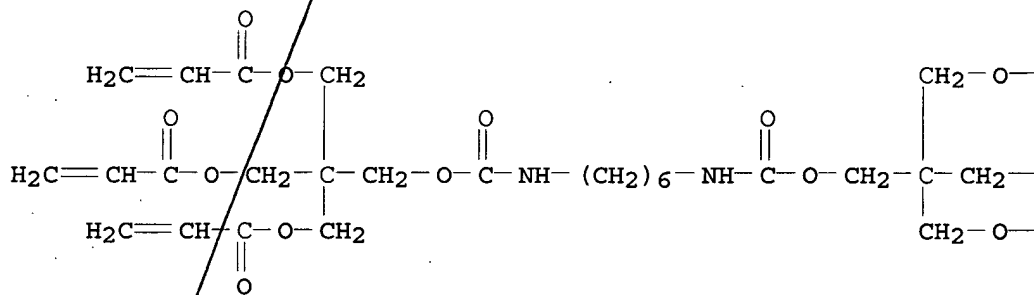


CM 3

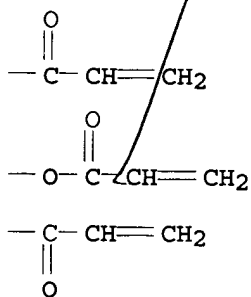
CRN 77001-81-1

CMF C36 H48 N2 O16

PAGE 1-A



PAGE 1-B

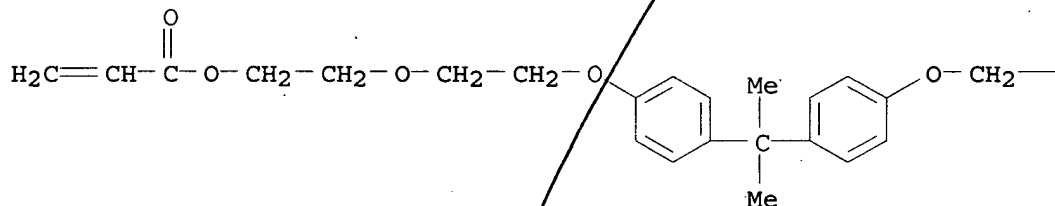


CM 4

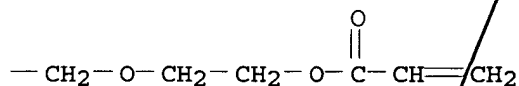
CRN 56361-55-8

CMF C29 H36 O8

PAGE 1-A



PAGE 1-B



IC ICM G03F007-028

ICS C08F002-44; C08F002-50; G02B005-20; G03F007-00; G03F007-027;  
G03F007-032; G03F007-11CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)

IT 280569-05-3P

(photopolymerizable composition containing aromatic amide  
**photopolymn. initiator** for photoimaging  
material and presensitized lithog. plate)

L19 ANSWER 21 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:408835 HCAPLUS

DOCUMENT NUMBER: 133:51365

TITLE: Photopolymerization initiator composition,  
photosensitive colored composition, color  
filter, and liquid crystal display device  
Sato, Hiroyuki; Fukumura, Takanori; Oizumi,  
Fumitaka

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|------|
| JP 2000169512 | A2   | 20000620 | JP 1998-346404  | 1998 |

1998

1207

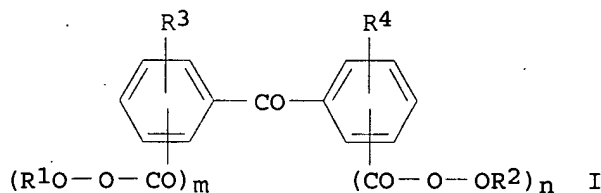
PRIORITY APPLN. INFO.:

JP 1998-346404

1998

1207

OTHER SOURCE(S): MARPAT 133:51365  
GI



AB The composition contains polymer of weight-average mol. weight (measured by GPC in DMF) 1000-100,000 manufactured by radical polymerization of vinyl monomer using benzophenone structure-containing organic peroxide as an initiator. The initiator may be I (R<sup>1</sup>, R<sup>2</sup> = C<sub>4</sub>-15 alkyl, C<sub>9</sub>-15 aralkyl; R<sup>3</sup>, R<sup>4</sup> = H, C<sub>1</sub>-30 organic group; m = 0-3; n = 1-3). The composition shows high photosensitivity.

IT 275798-91-9P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-Kayarad TC 110S copolymer (initiator binder polymer; photopolymer).  
initiator composition containing benzophenone peroxide for color filter for liquid crystal display)

RN 275798-91-9 HCAPLUS

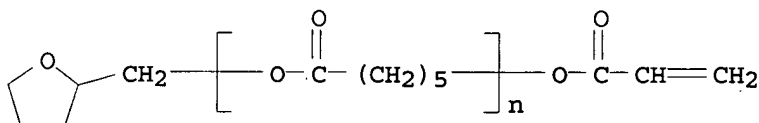
CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, phenylmethyl 2-methyl-2-propenoate and α-[(tetrahydro-2-furanyl)methyl]-ω-[(1-oxo-2-propenyl)oxyl]poly[oxy(1-oxo-1,6-hexanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 87320-06-7

CMF (C<sub>6</sub> H<sub>10</sub> O<sub>2</sub>)<sub>n</sub> C<sub>8</sub> H<sub>12</sub> O<sub>3</sub>

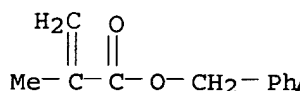
CCI PMS



CM 2

CRN 2495-37-6

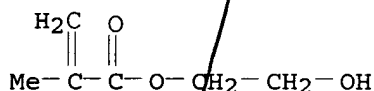
CMF C<sub>11</sub> H<sub>12</sub> O<sub>2</sub>



CM 3

CRN 868-77-9

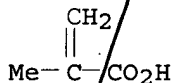
CMF C6 H10 O3



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM C08F004-36

ICS G02B005-20; C07C409-38

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 67

IT 275798-91-9P, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-Kayarad TC 110S copolymer (initiator binder polymer; photopolymer).

initiator composition containing benzophenone peroxide for color filter for liquid crystal display)

L19 ANSWER 22 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:151535 HCAPLUS

DOCUMENT NUMBER: 132:209252

TITLE: Surface grafting treatment by irradiation with active energy ray

INVENTOR(S): Okuo, Masaki; Harada, Eiji; Higuchi, Yoshiki

PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|------|
| JP 2000072904 | A2   | 20000307 | JP 1998-245763  | 1998 |

PRIORITY APPLN. INFO.:

JP 1998-245763

0831

1998

0831

OTHER SOURCE(S): MARPAT 132:209252

AB Title method comprises (1) forming layers containing photopolymn. initiating group-containing compds. or polymers on substrates, (2) contacting the resulting layers with compns. containing radically polymerizable monomers and tackifiers, and (3) irradiating with active energy ray. Thus, a composition containing benzophenone, poly(Me methacrylate), and PPZ (phosphazene hexafunctional methacrylate) was applied on a polycarbonate substrate and dried to give a film, on which a composition containing methacrylic acid and poly(N,N-dimethylacrylamide) was applied and irradiated with UV light to give a hydrophilic coating showing pencil hardness 3H and good surface smoothness.

IT 215461-75-9P

(photopolymn. initiators; surface grafting treatment by photoirradn. for manufacture of functional coatings)

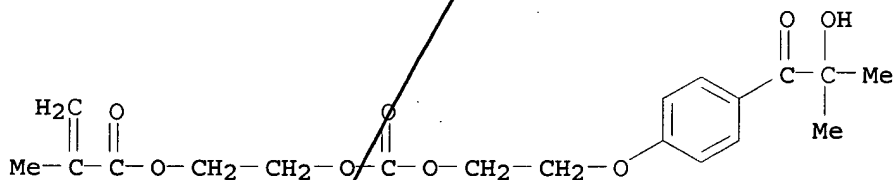
RN 215461-75-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[2-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenoxy]ethoxy]carbonyl]oxy]ethyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 203309-79-9

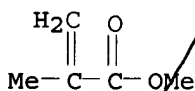
CMF C19 H24 O8



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM C08J007-06

ICS C03C017-32; C08F002-00; C08F002-44; C08J007-18

CC 42-10 (Coatings, Inks, and Related Products)

IT 215461-75-9P 260397-40-8P 260397-41-9P 260397-42-0P

260397-43-1P

(photopolymn. initiators; surface grafting treatment by photoirradn. for manufacture of functional coatings)



L19 ANSWER 23 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2000:120808 HCAPLUS  
 DOCUMENT NUMBER: 132:171169  
 TITLE: Photocurable dental materials  
 INVENTOR(S): Himeno, Masataka; Kazama, Hideki  
 PATENT ASSIGNEE(S): Tokuyama Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|------|
| -----         | ---- | -----    | -----           |      |
| JP 2000053519 | A2   | 20000222 | JP 1998-222521  |      |

1998  
0806

PRIORITY APPLN. INFO.: JP 1998-222521

1998  
0806

AB This invention relates to photocurable dental restorative materials comprising (1) polymerizable monomers, (2) bisacylphosphine oxide photopolymerization initiators, and (3) fillers containing amorphous inorganic granules with an average diameter 1-9  $\mu\text{m}$ , spherical inorganic granules with an average diameter of 0.1-5  $\mu\text{m}$ , and inorganic microgranules with an average diameter of 0.01-0.1  $\mu\text{m}$ . The invention dental materials display improved workability, mechanical strength, and surface lubricative property. A filler composition for dental composites was prepared containing spherical silica/zirconia granules (average diameter 0.52  $\mu\text{m}$ ), spherical silica/titania microgranules (average diameter 0.08  $\mu\text{m}$ ), and  $\gamma$ -methacryloxypropyltrimethoxysilane-treated amorphous silica/zirconia (average diameter 3.4  $\mu\text{m}$ ) at the weight ratio of 0.7:0.3:1.0. A monomer mixture solution containing bismethacryloylethoxyphenylpropane 70, trimethylene glycol dimethacrylate 15, 1,6-bis(methacryloxyloxycarbonylamino)-2,2,4-trimethylhexane 15, and bis(2,4,6-trimethylbenzoyl)-phenylphosphine oxide 0.5 part was mixed with the above fillers to give a paste. The paste was cured and its properties, such as bending strength, fracture toughness, and color stability, were studied.

IT 259145-22-7

(photocurable dental composites containing bisacylphosphine oxide polymerization initiators)

RN 259145-22-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,3-propanediyl ester, polymer with  $\alpha, \alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -[(2-methyl-1-oxo-2-propenyl)oxylpoly(oxy-1,2-ethanediyl)] and 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

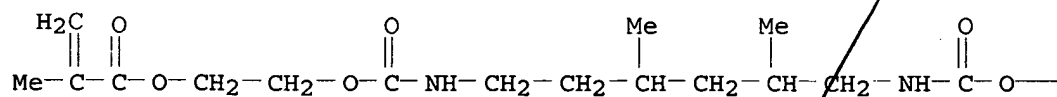
CM 1

CRN 72869-86-4

CMF C23 H38 N2 O8

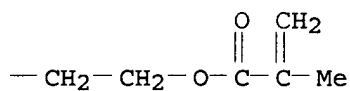
CCI IDS

PAGE 1-A



D1-Me

PAGE 1-B



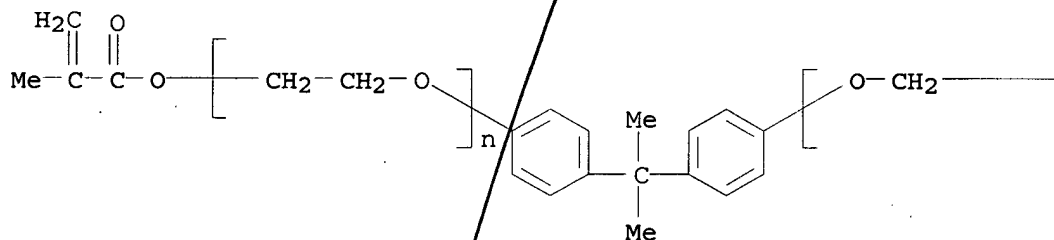
CM 2

CRN 41637-38-1

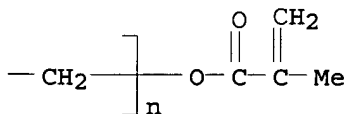
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



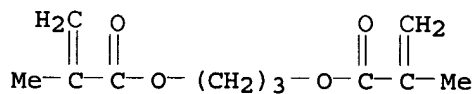
PAGE 1-B



CM 3

CRN 1188-09-6

CMF C11 H16 O4



IC ICM A61K006-08  
ICS A61K006-00  
CC 63-7 (Pharmaceuticals)  
IT 259145-22-7  
(photocurable dental composites containing bisacylphosphine oxide polymerization initiators)

L19 ANSWER 24 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:88467 HCAPLUS

DOCUMENT NUMBER: 132:144435

TITLE: Presensitized lithographic original plate using photopolymerization initiator having controlled light absorption

INVENTOR(S): Maemoto, Kazuo

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE              |
|------------------------|------|----------|-----------------|-------------------|
| JP 2000039711          | A2   | 20000208 | JP 1999-97338   | 1999<br>0405      |
| US 6258510             | B1   | 20010710 | US 1999-315429  | 1999<br>0520      |
| PRIORITY APPLN. INFO.: |      |          | JP 1998-139624  | A<br>1998<br>0521 |

AB The title lithog. original plate comprises a surface-treated Al support having a center line average surface roughness (Ra) of 0.30-0.55  $\mu\text{m}$  coated with a photosensitive layer made of a photosensitive composition containing a water-soluble or water-dispersible polymer, a monomer or oligomer having  $\geq 1$  photopolymerizable ethylenic unsatd. double bond, and a photopolymn. initiators in which the  $\lambda_{\text{max}}$  is in the range of 330-375 nm and the ratio of absorbance at 400 nm to that at  $\lambda_{\text{max}}$  is  $< 0.1$ . Treatment after exposure is not necessary and the plate shows high printing durability and fogging is suppressed when the exposed plate is allowed to stand under white light till printing.

IT 257297-35-1, uses 257297-36-2  
257297-37-3

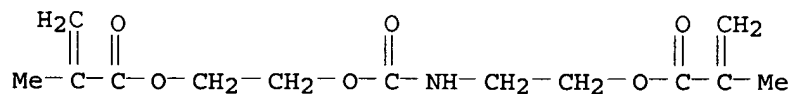
(presensitized lithog. plate containing water-soluble or water-dispersible polymer, ethylenic compound and photopolymn. initiator)

RN 257297-35-1 HCAPLUS

CN Methanaminium, N,N,N-trimethyl-, salt with 2-methyl-2-propenoic acid (1:1), polymer with 2-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 139096-43-8  
CMF C13 H19 N O6

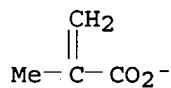


CM 2

CRN 16431-84-8  
CMF C4 H12 N . C4 H5 O2

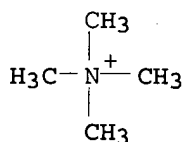
CM 3

CRN 18358-13-9  
CMF C4 H5 O2



CM 4

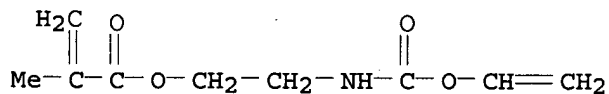
CRN 51-92-3  
CMF C4 H12 N



RN 257297-36-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-[[[ethenyloxy)carbonyl]amino]ethyl ester, polymer with ethenol (9CI) (CA INDEX NAME)

CM 1

CRN 173210-80-5  
CMF C9 H13 N O4



CM 2

CRN 557-75-5  
CMF C2 H4 O



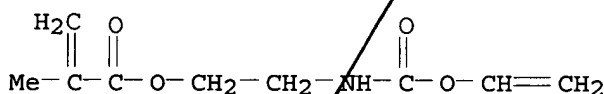
RN 257297-37-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[(ethenyloxy)carbonyl]amino]ethyl ester, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 173210-80-5

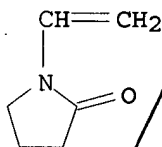
CMF C9 H13 N O4



CM 2

CRN 88-12-0

CMF C6 H9 N O



IC ICM G03F007-028

ICS G03F007-00; G03F007-004; G03F007-027

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 3524-68-3, Aronix M 305 4986-89-4, Pentaerythritol tetraacrylate  
 9003-39-8, Polyvinylpyrrolidone 87718-21-6, Acrylonitrile-benzyl  
 methacrylate-2-hydroxyethyl methacrylate-methacrylic acid  
 copolymer 90216-38-9, Allyl methacrylate-methacrylic acid  
 copolymer 257297-33-9, uses 257297-34-0, uses  
 257297-35-1, uses 257297-36-2  
 257297-37-3 257297-38-4 257297-40-8 257297-41-9  
 (presensitized lithog. plate containing water-soluble or  
 water-dispersible polymer, ethylenic compound and  
 photopolymer. initiator)

L19 ANSWER 25 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:32492 HCAPLUS

DOCUMENT NUMBER: 132:85922

TITLE: Photosensitive resin composition and photosensitive element using same

INVENTOR(S): Tanaka, Yoji; Kimura, Noriyo; Ozawa, Kyoko

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| JP 2000010278 | A2   | 20000114 | JP 1998-172318  | 1998<br>0619 |

PRIORITY APPLN. INFO.: JP 1998-172318

1998  
0619

AB The title resin composition contains (a) a vinyl copolymer comprising monomers CH<sub>2</sub>:CR<sub>1</sub>CO<sub>2</sub>(CHR<sub>2</sub>CHR<sub>3</sub>O)<sub>n</sub>COCHR<sub>4</sub>CHR<sub>5</sub>CO<sub>2</sub>H, CH<sub>2</sub>:CR<sub>6</sub>CO<sub>2</sub>R<sub>7</sub>, and CH<sub>2</sub>:CR<sub>8</sub>CO<sub>2</sub>R<sub>9</sub> (R<sub>1</sub>-6, R<sub>8</sub> = H or Me; R<sub>7</sub> = C<sub>1</sub>-3 alkyl; R<sub>9</sub> = C<sub>10</sub>-22 alkyl; n = 1-5) as copolymer components, (b) an ethylenic unsatd. compound, and (c) a photopolymn. initiator. A photosensitive element is also claimed, comprising a support having a layer made of the resin composition. The composition shows improved coatability when coated on uneven substrates and high alkali developability and the photosensitive element exhibits high storage stability.

IT 253672-52-5

(photoresist containing vinyl polymer, ethylenic compound, and photopolymn. initiator)

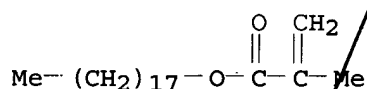
RN 253672-52-5 HCAPLUS

CN Butanedioic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with methyl 2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 32360-05-7

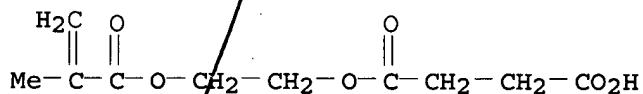
CMF C22 H42 O2



CM 2

CRN 20882-04-6

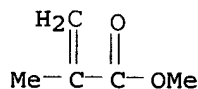
CMF C10 H14 O6



CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-033  
 ICS G03F007-027; H05K003-06; H05K003-18  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 IT 109-17-1, Tetraethylene glycol dimethacrylate 41637-38-1, BPE 500 253672-52-5  
 (photoresist containing vinyl polymer, ethylenic compound, and photopolymn. initiator)

L19 ANSWER 26 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:490234 HCAPLUS  
 DOCUMENT NUMBER: 131:163402  
 TITLE: Presensitized lithographic plate containing microgel and production of lithographic plate  
 INVENTOR(S): Takagi, Hiroshi  
 PATENT ASSIGNEE(S): Konica Co., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE      |
|-------------|------|----------|-----------------|-----------|
| JP 11212251 | A2   | 19990806 | JP 1998-17033   | 1998 0129 |

PRIORITY APPLN. INFO.: JP 1998-17033  
 1998 0129

AB The title presensitized lithog. plate comprises a coarsened and anodized Al support coated with a photosensitive composition layer containing a diazo resin, a photopolymn. initiator, and a microgel having addition-polymerizable unsatd. groups on its surface. The photosensitive layer may contain a diazo resin and a microgel having photo-crosslinkable groups on its surface. The lithog. plate is imagewise exposed and developed with an aqueous developing solution containing no organic solvent substantially to remove the unexposed area to give a printing plate. The presensitized lithog. plate shows high image strength, printing durability, and ink adhesion.

IT 135623-21-1P  
 (presensitized lithog. plate containing diazo resin, photopolymn. initiator, and microgel)

RN 135623-21-1 HCAPLUS

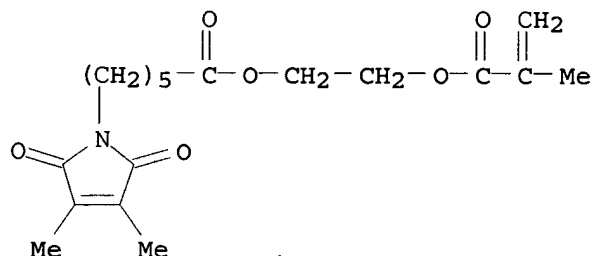
CN Butanedioic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate) and 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 2,5-dihydro-3,4-dimethyl-2,5-dioxo-1H-pyrrole-1-hexanoate (9CI) (CA INDEX NAME)

*Infrared  
absorbent?*

CM 1

CRN 135623-20-0

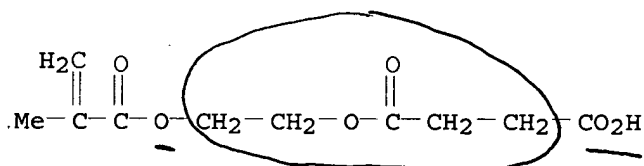
CMF C18 H25 N O6



CM 2

CRN 20882-04-6

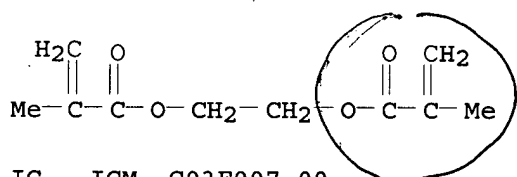
CMF C10 H14 O6



CM 3

CRN 97-90-5

CMF C10 H14 O4



IC ICM G03F007-00

ICS B41N003-03; G03F007-004; G03F007-016

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 150-33-4DP, p-Diazodiphenylamine sulfate, reaction products with acrylic polymer with sulfonic acid group 7646-85-7DP, Zinc chloride, reaction products with diazo resin and ammonium hexafluorophosphate 16941-11-0DP, Ammonium hexafluorophosphate, reaction products with zinc chloride and diazo resin 125998-81-4DP, 4-Diazodiphenylamine-formaldehyde-p-hydroxybenzoic acid copolymer, reaction products with zinc chloride and ammonium hexafluorophosphate 135623-21-1P 135623-40-4P, 2-Acetoacetoxy ethyl methacrylate-allyl methacrylate-ethylene glycol dimethacrylate copolymer 236735-04-9DP, Allyl methacrylate-1,4-butanediol diacrylate-ethyl acrylate-methyl methacrylate-styrene sulfonic acid copolymer, reaction products with diazodiphenylamine sulfate 236737-56-7P, Butyl methacrylate-ethylene glycol dimethacrylate-2-hydroxyethyl



methacrylate-succinic acid mono(2-methacryloyloxy)ethyl ester  
 copolymer methacrylate  
 (presensitized lithog. plate containing diazo resin,  
 photopolymer. initiator, and microgel)

L19 ANSWER 27 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:326007 HCAPLUS  
 DOCUMENT NUMBER: 130:353695  
 TITLE: Thermo-oxidatively curable solventless coating  
 composition based on acrylate oligomer and  
 coating substrates  
 INVENTOR(S): Edgington, Garry J.  
 PATENT ASSIGNEE(S): The Edgington Company, USA  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE               |
|--|------|----------|-----------------|--------------------|
| WO 9924512   | A1   | 19990520 | WO 1998-US23618 | 1998<br>1105       |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,<br>CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HU, ID, IL,<br>IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,<br>MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,<br>SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW,<br>AM, AZ, BY, KG, KZ, MD, RU, TJ, TM<br>RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE,<br>DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF,<br>BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG |      |          |                 |                    |
| AU 9913836   | A1   | 19990531 | AU 1999-13836   | 1998<br>1105       |
| US 6037014   | A    | 20000314 | US 1998-186591  | 1998<br>1105       |
| EP 1042410   | A1   | 20001011 | EP 1998-957619  | 1998<br>1105       |
| R: DE, FR, GB, IT, NL<br>US 6395822 B1 20020528 US 1999-465577   |      |          |                 |                    |
| PRIORITY APPLN. INFO.:   |      |          |                 | 1999<br>1217       |
| US 1997-63984P   |      |          |                 | P<br>1997<br>1106  |
| US 1998-186591   |      |          |                 | A3<br>1998<br>1105 |
| WO 1998-US23618  |      |          |                 | W<br>1998<br>1105  |

AB A liquid coating composition that is thermally-curable in the presence of O, comprises a monomer or oligomer containing  $\geq 2$  acrylate and/or methacrylate functional groups, an azo initiator, and O. A substrate such as metal can, auto part, sheet, etc. is coated with a thin film of the composition and heated in the presence of O to cure. Thus, Desmodur I-SR 495 urethane acrylate adduct 40, SR 492 160, Vazo 88 2, BYK 331 0.4, and Polycure 503 0.04 g was sprayed onto a top coat and cured at 132.2° for 30 min in the presence of O (air) to give a cured coating having pencil hardness 3H, 20° gloss 81.5, and flex (bend test) 5T.

IT 224626-89-5P

(thermo-oxidatively curable solventless coating composition based on acrylate oligomer and azo initiator)

RN 224626-89-5 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)],  $\alpha$ -hydro- $\omega$ -[(2-methyl-1-oxo-2-propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), polymer with  $\alpha$ -hydro- $\omega$ -[(1-oxo-2-propenyl)oxy] [poly[oxy(methyl-1,2-ethanediyl)]] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

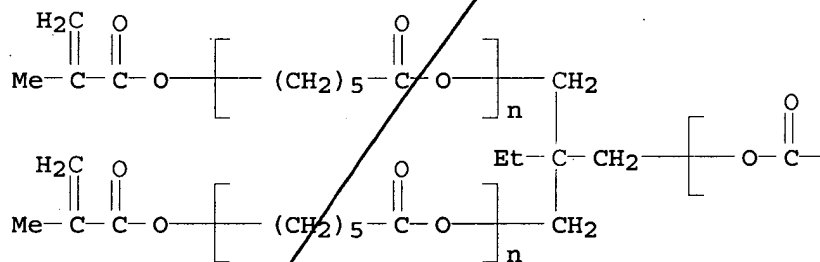
CM 1

CRN 99716-99-1

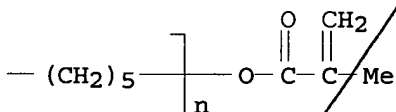
CMF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C18 H26 O6

CCI PMS

PAGE 1-A



PAGE 1-B



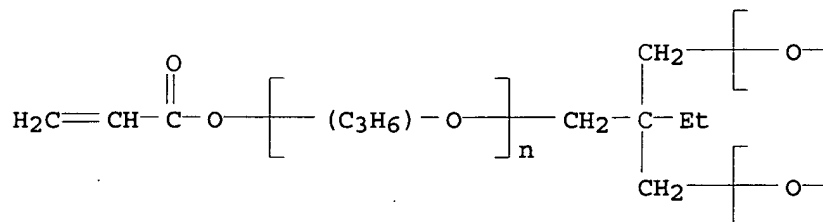
CM 2

CRN 53879-54-2

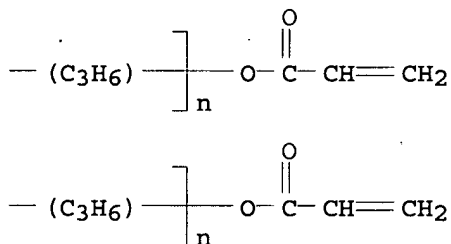
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C15 H20 O6

CCI IDS, PMS

PAGE 1-A



PAGE 1-B



IC ICM C09D004-00

ICS C09D004-06

CC 42-7 (Coatings, Inks, and Related Products)

IT 224626-86-2P 224626-88-4P 224626-89-5P

(thermo-oxidatively curable solventless coating composition based on acrylate oligomer and azo initiator)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L19 ANSWER 28 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:260851 HCAPLUS

DOCUMENT NUMBER: 130:330645

TITLE: Colored image-forming photosensitive solution,  
manufacture of color filter, and color filterINVENTOR(S): Sonobe, Hiroyuki; Kobayashi, Yuji; Sasaki,  
Shoichi; Uchida, Takeshi; Muramatsu, Yukiko;  
Kimura, Yoichi; Yamazaki, Koji

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 11109615 | A2   | 19990423 | JP 1997-267561  | 1997<br>0930 |

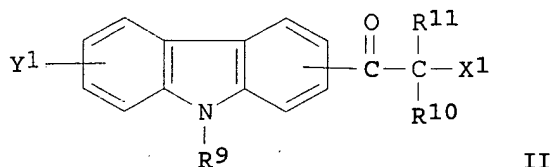
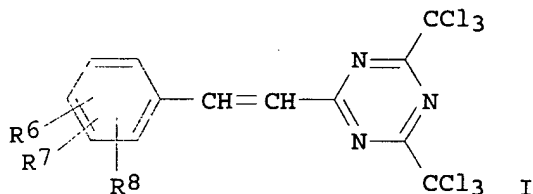
PRIORITY APPLN. INFO.:

JP 1997-267561

1997  
0930

OTHER SOURCE(S):  
GI

MARPAT 130:330645



AB The title photosensitive solution contains (a) a resin, (b) a pigment, (c) a monomer having  $\geq 1$  photopolymerizable unsatd. bond in its mol., and (d) a combination of a trihalomethyl-sym.-triazine compound I and a carbazole compound II (R6-8 = H, OH, alkyl, alkoxy, aryl; R9 = H, C1-20 alkyl; R10, R11 = H, C1-5 alkyl, aryl; X1 = amino, alkylamino, dialkylamino, morpholino; Y1 = H, COCR11R10X1) as photopolymn. initiators. A color filter is also claimed, which is manufactured by repeating a process in which the solution is coated on a substrate and dried to form a film, imagewise exposed to an active ray to cure the exposed area, and developed to remove the unexposed area to form a pixel using plural different color solns. The photosensitive provides a high resolution pattern with good profile and the defects of the product arising from the sublimate of photopolymn. initiators.

IT 178889-44-6

(photosensitive composition containing triazine derivative and carbazole compound as photopolymn. initiators for manufacture of color filter)

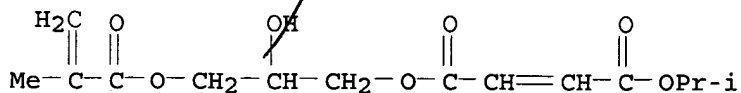
RN 178889-44-6 HCAPLUS

CN 2-Butenedioic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl 1-methylethyl ester, polymer with ethenylbenzene and 1-methylethyl hydrogen 2-butenedioate (9CI)  
(CA INDEX NAME)

CM 1

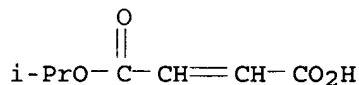
CRN 178889-43-5

CMF C14 H20 O7



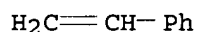
CM 2

CRN 114290-62-9  
CMF C7 H10 O4



CM 3

CRN 100-42-5  
CMF C8 H8



IC ICM G03F007-004  
ICS C08F002-50; C08L101-00; G02B005-20; G03F007-027; G03F007-029  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 4986-89-4, Pentaerythritol tetraacrylate 15625-89-5, Trimethylolpropane triacrylate 178889-44-6 (photosensitive composition containing triazine derivative and carbazole compound as **photopolymn. initiators** for manufacture of color filter)

L19 ANSWER 29 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:260850 HCAPLUS

DOCUMENT NUMBER: 130:330644

TITLE: Colored image-forming photosensitive solution, manufacture of color filter, and color filter

INVENTOR(S): Sasaki, Shouichi; Kobayashi, Yuji; Sonobe, Hiroyuki; Uchida, Takeshi; Muramatsu, Yukiko; Kimura, Yoichi; Yamazaki, Koji

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE |
|-------------|------|----------|-----------------|------|
| -----       | ---- | -----    | -----           |      |
| JP 11109614 | A2   | 19990423 | JP 1997-267560  |      |

1997

0930

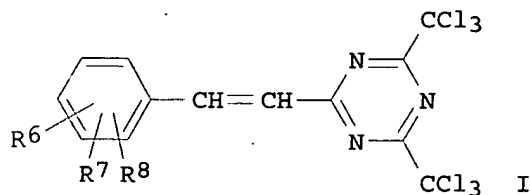
PRIORITY APPLN. INFO.: JP 1997-267560

1997

0930

OTHER SOURCE(S): MARPAT 130:330644

GI



AB The title photosensitive solution contains (a) a resin, (b) a pigment, (c) a monomer having  $\geq 1$  photopolymerizable unsatd. bond in its mol., and (d) a trihalomethyl-sym.- triazine-type photopolymer. initiator I (R6-8 = H, OH, alkyl, alkoxy, aryl). A color filter is also claimed, which is manufactured by repeating a process in which the solution is coated on a substrate and dried to form a film, imagewise exposed to an active ray to cure the exposed area, and developed to remove the unexposed area to form a pixel using plural different color solns. The photosensitive solution shows high photosensitivity and provides high resolution patterns.

IT 178889-44-6

(photosensitive composition containing trihalomethyltriazine photopolymer. initiator for manufacture of color filter)

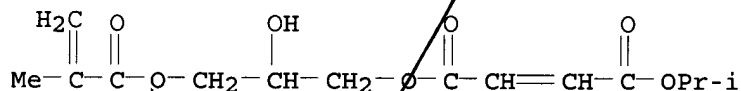
RN 178889-44-6 HCAPLUS

CN 2-Butenedioic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl 1-methylethyl ester, polymer with ethenylbenzene and 1-methylethyl hydrogen 2-butenedioate (9CI)  
(CA INDEX NAME)

CM 1

CRN 178889-43-5

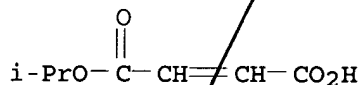
CMF C14 H20 O7



CM 2

CRN 114290-62-9

CMF C7 H10 O4



CM 3

CRN 100-42-5

CMF C8 H8

H<sub>2</sub>C=CH-Ph

IC ICM G03F007-004  
ICS C08F291-00; G02B005-20; G03F007-027; G03F007-029  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 4986-89-4, Pentaerythritol tetraacrylate 15625-89-5,  
Trimethylolpropane triacrylate **178889-44-6**  
(photosensitive composition containing trihalomethyltriazine  
**photopolymn. initiator** for manufacture of color  
filter)

L19 ANSWER 30 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:65110 HCAPLUS  
DOCUMENT NUMBER: 130:183903  
TITLE: Materials coated with hydrophilic graft  
copolymers showing reduced water flow  
resistance  
INVENTOR(S): Ohtsuka, Toshiji; Sahara, Takashi; Nomura,  
Shigeki  
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE |
|-------------|------|----------|-----------------|------|
| -----       | ---- | -----    | -----           |      |
| JP 11019578 | A2   | 19990126 | JP 1997-178203  |      |

1997  
0703

PRIORITY APPLN. INFO.: JP 1997-178203

1997  
0703

AB Materials suitable for ship, swimming suits, etc., have undercoatings of polymers having photopolymn.-initiating portions, which are converted into graft copolymers with hydrophilic monomers on the surface under actinic ray irradiation. Thus, reacting 10.0 g 4-(2-hydroxyethoxy)phenyl 2-hydroxy-2-Pr ketone (Irgacure 2959) and 6.92 g 2-methacryloxyethyl isocyanate (Kalenr MOI) to give a photopolymn. initiator-containing monomer (I), polymerizing 5.01 g I and 11.87 g Me methacrylate to give a copolymer (II), applying a mixture of 1.0 g II and 4.0 g MEK on an acrylic resin plate (Acrylite EX) followed by drying at 80° for 2 min to form the undercoating, potting a solution of 1.0 g 2-acrylamido-2-methylpropanesulfonic acid in 3.5 g water on the undercoating, and UV irradiating for 5 min gave a test piece showing reduced water flow resistance.

IT **220592-75-6P**  
(coatings; graft polymerization of hydrophilic monomers and  
**initiator**-containing undercoating polymers giving coated  
products with reduced water flow resistance)

RN 220592-75-6 HCAPLUS

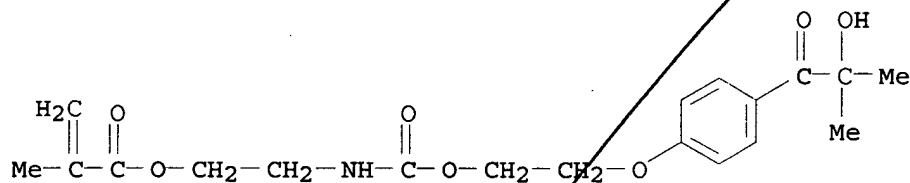
CN 2-Propenoic acid, 2-methyl-, 2-[[[2-[4-(2-hydroxy-2-methyl-1-

oxopropyl)phenoxy]ethoxy]carbonyl]amino]ethyl ester, polymer with methyl 2-methyl-2-propenoate and 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid, graft (9CI) (CA INDEX NAME)

CM 1

CRN 131513-13-8

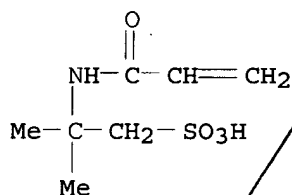
CMF C19 H25 N O7



CM 2

CRN 15214-89-8

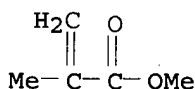
CMF C7 H13 N O4 S



CM 3

CRN 80-62-6

CMF C5 H8 O2



IT 189310-63-2P 202347-20-4P 220592-76-7P  
(graft polymerization of hydrophilic monomers and initiator  
-containing undercoating polymers giving coated products with  
reduced water flow resistance)

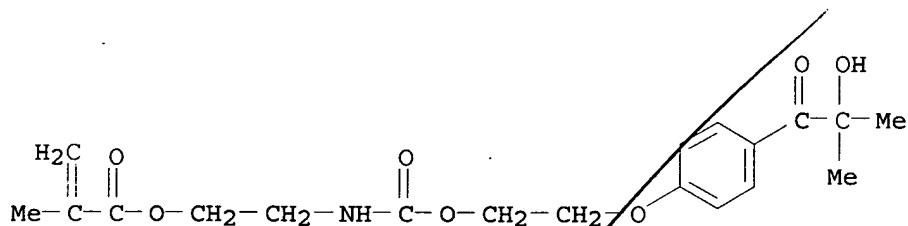
RN 189310-63-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[2-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenoxy]ethoxy]carbonyl]amino]ethyl ester, polymer with N,N-dimethyl-2-propenamide and methyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

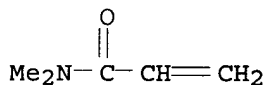


CRN 131513-13-8  
CMF C19 H25 N O7



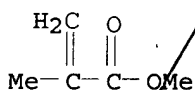
CM 2

CRN 2680-03-7  
CMF C5 H9 N O



CM 3

CRN 80-62-6  
CMF C5 H8 O2



RN 202347-20-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-[[[2-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenoxy]ethoxy]carbonyl]amino]ethyl ester, polymer with methyl 2-methyl-2-propenoate, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and NK Oligo UA-W 2, graft (9CI) (CA INDEX NAME)

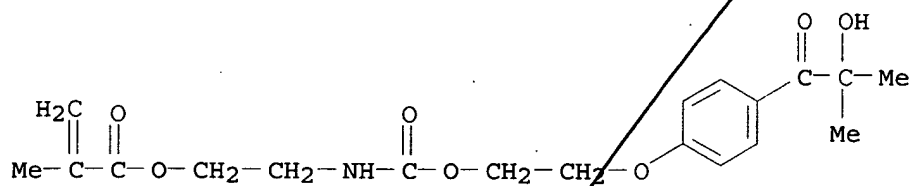
CM 1

CRN 199618-54-7  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

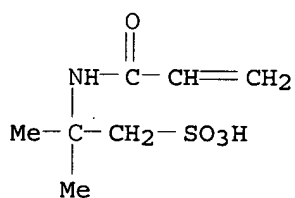
CRN 131513-13-8  
CMF C19 H25 N O7



CM 3

CRN 15214-89-8

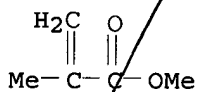
CMF C7 H13 N O4 S



CM 4

CRN 80-62-6

CMF C5 H8 O2



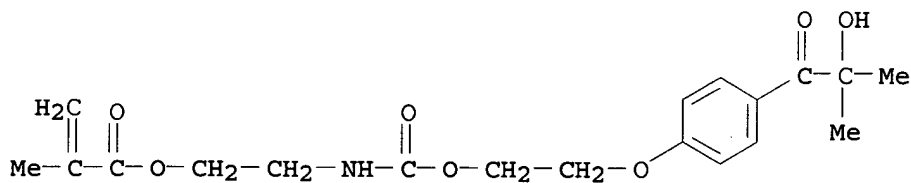
RN 220592-76-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[2-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenoxy]ethoxy]carbonyl]amino]ethyl ester, polymer with methyl 2-methyl-2-propenoate and 2-propenoic acid, graft (9CI)  
(CA INDEX NAME)

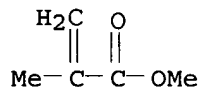
CM 1

CRN 131513-13-8

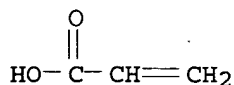
CMF C19 H25 N O7



CM 2

CRN 80-62-6  
CMF C5 H8 O2

CM 3

CRN 79-10-7  
CMF C3 H4 O2

IC ICM B05D005-00  
ICS C08F291-00; C09D004-00  
CC 42-10 (Coatings, Inks, and Related Products)  
IT 202200-77-9P, 2-Acrylamido-2-methylpropanesulfonic  
acid-tetraethoxysilane graft copolymer **220592-75-6P**  
(coatings; graft polymerization of hydrophilic monomers and  
**initiator**-containing undercoating polymers giving coated  
products with reduced water flow resistance)  
IT **189310-63-2P 202347-20-4P 220592-76-7P**  
(graft polymerization of hydrophilic monomers and **initiator**  
-containing undercoating polymers giving coated products with  
reduced water flow resistance)

L19 ANSWER 31 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:795437 HCAPLUS  
DOCUMENT NUMBER: 130:95975  
TITLE: Hydroxyalkylphenone derivatives and their uses  
as photopolymerization initiators  
INVENTOR(S): Hikuchi, Yoshiki; Okuo, Masaki; Harada, Eiji;  
Omura, Hiroshi; Suyama, Shuji  
PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE           |
|------------------------|------|----------|-----------------|----------------|
| JP 10330317            | A2   | 19981215 | JP 1997-144008  | 1997<br>0602   |
| PRIORITY APPLN. INFO.: |      |          |                 | JP 1997-144008 |
|                        |      |          |                 | 1997<br>0602   |

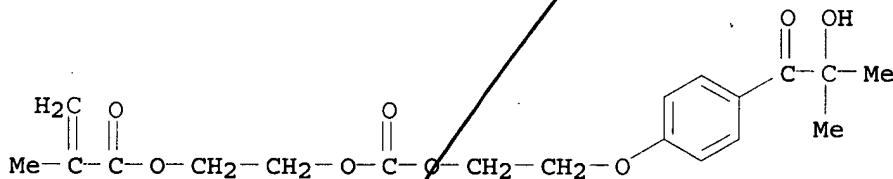
IT 218923-82-1P

RN 218923-82-1 HCAPLUS

CM 1

CRN 203309-79-9

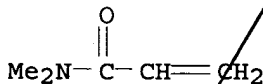
CMF C19 H24 O8



CM 2

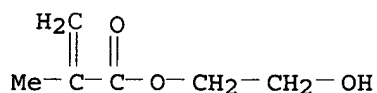
CRN 2680-03-7

CMF C5 H9 N O

CM  $\beta$ 

CRN 868-77-9

CMF C6 H10 O3



IC ICM C07C069-54  
 ICS C07C233-20; C07C323-22; C08F002-50  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 42  
 IT 203309-79-9P 218923-26-3P 218923-32-1P 218923-48-9P  
 218923-66-1P 218923-82-1P 218924-20-0P 219316-73-1P  
 (photopolymer. initiators containing  
 hydroxyalkylphenone derivs. for light-curable compns.)

L19 ANSWER 32 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:760038 HCAPLUS

DOCUMENT NUMBER: 130:25733

TITLE: An active-energy-ray-curable composition  
 comprised of a maleimide derivative and a  
 method for curing the said curable composition

INVENTOR(S): Sakurai, Yoshinobu; Miyakawa, Atsushi;  
 Yonehara, Hisatomo; Ishikawa, Hidenobu;  
 Takahashi, Katsuji

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Eur. Pat. Appl., 51 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

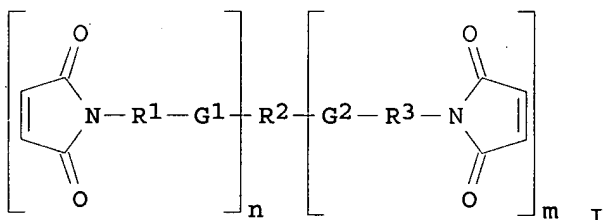
| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE              |
|--|------|----------|-----------------|-------------------|
| EP 878482  | A1   | 19981118 | EP 1998-108934  | 1998<br>0515      |
| EP 878482  | B1   | 20030326 |                 |                   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,<br>MC, PT, IE, SI, LT, LV, FI, RO |      |          |                 |                   |
| JP 11124403  | A2   | 19990511 | JP 1998-79678   | 1998<br>0326      |
| JP 3599160   | B2   | 20041208 |                 |                   |
| US 6410611   | B1   | 20020625 | US 1998-79523   | 1998<br>0515      |
| US 2004127596  | A1   | 20040701 | US 2003-650138  | 2003<br>0827      |
| US 6858656   | B2   | 20050222 |                 |                   |
| PRIORITY APPLN. INFO.:   |      |          | JP 1997-126970  | A<br>1997<br>0516 |
|  |      |          | JP 1997-218770  | A<br>1997<br>0813 |

JP 1997-222402 A 1997  
0819

JP 1998-79678 A 1998  
0326

US 2001-831688 A3 2001  
0723

GI



AB Compns. containing maleimide derivs. I [R1, R3 = alkylene, alicyclic group, arylalkylene, or cycloalkylene; R2 = (poly)ether or (poly)ester linking group having mol. weight 100-100,000 and containing  $\geq 1$  of alkylene, hydroxyalkylene, alicyclic group, arylene, and arylalkylene connected by  $\geq 1$  of an ether and ester linkage; G1, G2 = CO<sub>2</sub> or OCO; m, n = 1-5; m + n < 6] are curable by active energy rays in the absence of photoinitiators. Thus, the polytetramethylene glycol diester with  $\omega$ -maleimidocaproic acid was cured by with 3 passes of 120 W medium-pressure Hg-vapor light 15 cm above the film and moving at 20 m/min on a glass plate to give a 50- $\mu$ m film with surface hardness 4B.

IT 216320-29-5P.

(active-energy-ray-curable composition containing maleimide derivs. in absence of initiators)

RN 216320-29-5 HCAPLUS

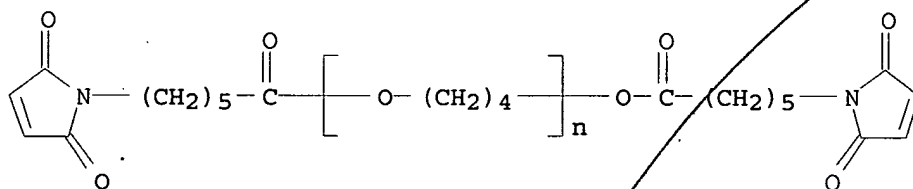
CN Poly(oxy-1,4-butanediyl),  $\alpha$ -[6-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-1-oxohexyl]- $\omega$ -[[6-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-1-oxohexyl]oxy]-, polymer with  $\alpha$ -hydro- $\omega$ -[(1-oxo-2-propenyl)oxy]poly[oxy(1-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 216249-61-5

CMF (C4 H8 O)<sub>n</sub> C20 H24 N2 O7

CCI PMS

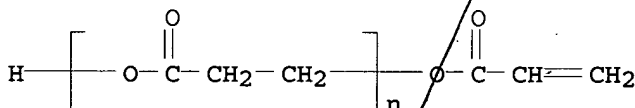


CM 2

CRN 117647-40-2

CMF (C3 H4 O2)<sub>n</sub> C3 H4 O2

CCI PMS



IC ICM C08F002-48

ICS C08F022-40; C08L067-00; C08L071-00

CC 37-3 (Plastics Manufacture and Processing)

|    |              |                     |              |              |
|----|--------------|---------------------|--------------|--------------|
| IT | 216249-62-6P | 216249-66-0P        | 216249-68-2P | 216249-72-8P |
|    | 216249-74-0P | 216249-77-3P        | 216249-79-5P | 216249-81-9P |
|    | 216249-82-0P | 216249-83-1P        | 216249-86-4P | 216249-87-5P |
|    | 216249-89-7P | 216249-90-0P        | 216249-91-1P | 216249-94-4P |
|    | 216249-95-5P | 216249-97-7P        | 216249-98-8P | 216249-99-9P |
|    | 216250-01-0P | 216250-02-1P        | 216250-03-2P | 216250-04-3P |
|    | 216250-05-4P | 216250-07-6P        | 216250-08-7P | 216250-09-8P |
|    | 216309-39-6P | 216309-40-9P        | 216309-42-1P | 216309-45-4P |
|    | 216311-89-6P | 216311-90-9P        | 216311-93-2P | 216311-95-4P |
|    | 216312-70-8P | 216320-09-1P        | 216320-14-8P | 216320-19-3P |
|    | 216320-24-0P | <b>216320-29-5P</b> | 216320-32-0P | 216320-35-3P |
|    | 216320-39-7P | 216372-31-5P        |              |              |

(active-energy-ray-curable composition containing maleimide derivs. in absence of initiators)

REFERENCE COUNT: 8

THERE ARE 8 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L19 ANSWER 33 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:594728 HCAPLUS

DOCUMENT NUMBER: 129:252497

TITLE: Developing solution for color image-forming  
photosensitive material, manufacture of color  
filter using same, and color filter

INVENTOR(S): Sasaki, Shoichi; Kobayashi, Yuji; Sonobe,  
Hiroyuki

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 10239836 | A2   | 19980911 | JP 1997-47881   | 1997<br>0303 |

PRIORITY APPLN. INFO.:

JP 1997-47881

1997  
0303

OTHER SOURCE(S): MARPAT 129:252497

AB The title developing solution contains  $\geq 1$  inorg. alkali selected from, NaOH, KOH, Na<sub>2</sub>CO<sub>3</sub>, K<sub>2</sub>CO<sub>3</sub>, Na<sub>2</sub>SiO<sub>3</sub>, K<sub>2</sub>SiO<sub>3</sub>, NaHCO<sub>3</sub>, and Na<sub>2</sub>B<sub>4</sub>O<sub>7</sub> and a compound R<sub>1</sub>CON(R<sub>2</sub>OH)<sub>2</sub> or R<sub>1</sub>CONHR<sub>2</sub>OH (R<sub>1</sub> = C<sub>1</sub>-19 alkyl; R<sub>2</sub> = C<sub>1</sub>-19 alkylene). The color image-forming material contains resins, pigments, monomers having  $\geq 1$  photopolymerizable unsatd. bond in its mol., and photopolymn. initiator. A method of manufacturing a color filter using the color image-forming material and the developing solution and a color filter manufactured by the method are also claimed. The inorg. alkali-type developing solution shows excellent developability without sludge generation and high resolution color filters are obtained.

IT 202479-53-6

(photoresist composition containing polymer, pigment, unsatd. compound, and **photopolymn. initiator** for manufacture of color filter)

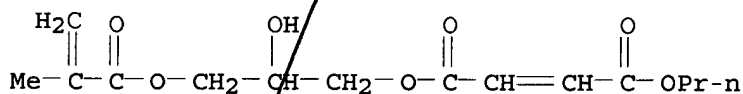
RN 202479-53-6 HCAPLUS

CN 2-Butenedioic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl propyl ester, polymer with ethenylbenzene and propyl hydrogen 2-butenedioate (9CI) (CA INDEX NAME)

CM 1

CRN 175519-30-9

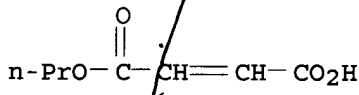
CMF C14 H20 O7



CM 2

CRN 147320-62-5

CMF C7 H10 O4



CM 3

CRN 100-42-5

CMF C8 H8



H<sub>2</sub>C=CH-Ph

IC ICM G03F007-004  
ICS G02B005-20; G03F007-32  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 4986-89-4, Pentaerythritol tetraacrylate 15625-89-5, Trimethylolpropane triacrylate 202479-53-6 (photoresist composition containing polymer, pigment, unsatd. compound, and **photopolymn. initiator** for manufacture of color filter)

L19 ANSWER 34 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:239620 HCAPLUS  
DOCUMENT NUMBER: 129:5663  
TITLE: Hydrophilic and antistaining surface treatment of substrates used in outdoors  
INVENTOR(S): Otsuka, Kenji; Eguchi, Yushi; Sahara, Kei  
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 10101827 | A2   | 19980421 | JP 1996-256758  | 1996<br>0927 |

PRIORITY APPLN. INFO.: JP 1996-256758

1996  
0927

AB The process involves irradiating the surface of primers containing photopolymn. initiators while the primers are brought in contact with hydrophilic monomers, hydrophobic monomers, and crosslinking agents with  $\geq 2$  unsatd. groups for grafting. Thus, reacting 10.0 g Irgacure 2959 and 6.92 g Karenzu MOI in THF in the presence of dibutyltin dilaurate and reacting 5.01 g p-CH<sub>2</sub>:CMeCO<sub>2</sub>C<sub>2</sub>H<sub>4</sub>NHCO<sub>2</sub>C<sub>2</sub>H<sub>4</sub>OC<sub>6</sub>H<sub>4</sub>COCMe<sub>2</sub>OH with 11.87 g Me methacrylate gave a copolymer, 1.0 g of which was dissolved in MEK and applied onto Acrylite EX to give a primer layer having photopolymn. initiator sites. A mixture of 5 g an aqueous solution containing 1.0 g TBAS-Q and 0.09 g N,N'-bis(methyleneacrylamide) and 2.5 g an iso-PrOH solution containing 1.0 g Light Acrylate FA 108 was potted on the primer, exposed to UV for grafting, washed, and dried to give test pieces showing contact angle to water 14° and cross-cut adhesion 100/100.

IT 207227-85-8P  
(primer with **photopolymn. initiator** sites;  
hydrophilic and antistaining surface treatment of substrates used in outdoors)

RN 207227-85-8 HCAPLUS

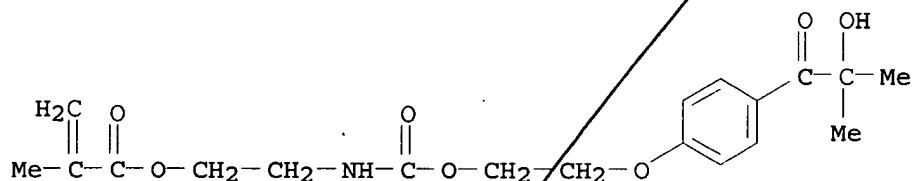
CN 2-Propenoic acid, 2-methyl-, 2-[[[2-[4-(2-hydroxy-2-methyl-1-

oxopropyl)phenoxy]ethoxy]carbonyl]amino]ethyl ester, polymer with  
methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 131513-13-8

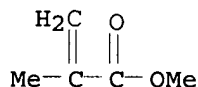
CMF C19 H25 N 07



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM C08J007-04

ICS C08J007-18; C09D004-06; C09D005-00; C09D151-00

CC 42-7 (Coatings, Inks, and Related Products)

IT 207227-85-8P

(primer with photopolymerization initiator sites;  
hydrophilic and antistaining surface treatment of substrates  
used in outdoors)

L19 ANSWER 35 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:664248 HCAPLUS

DOCUMENT NUMBER: 127:336685

TITLE: Photopolymerization initiators with high  
sensitivity to visible ray and  
photopolymerizable adhesives containing them  
for dental uses

INVENTOR(S): Sato, Takeshi; Kazama, Hideki; Oguri, Makoto

PATENT ASSIGNEE(S): Tokuyama Soda Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 09263604 | A2   | 19971007 | JP 1996-74808   | 1996<br>0328 |

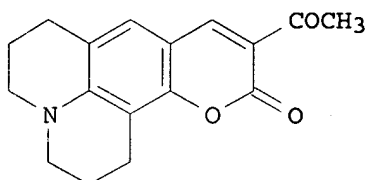
JP 3449388  
PRIORITY APPLN. INFO.:

B2 20030922

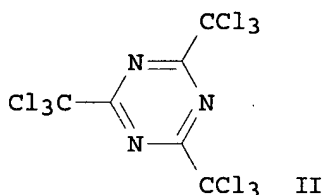
JP 1996-74808

1996  
0328

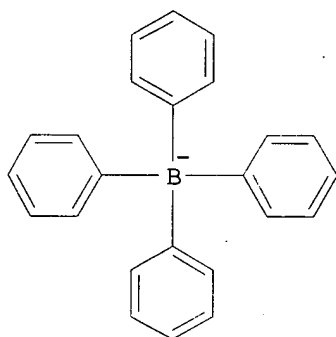
GI



I



II

<sup>+</sup>  
Na

III

AB Title polymerization initiators contain (A) sensitizing dyes having maximum absorption wavelength (MAW) at 350-680 nm, (B) acid-photogenerators, and (C) aryl borate compds.

Photopolymerizable adhesives comprise 0.01-10 parts the above polymerization initiators and 100 parts polymerizable monomers containing (meth)acrylate-based monomers and are useful for bonding dental filling materials with enamel or dentin. Thus, coumarin-based dye I (MAW = 452 nm) 0.01, light acid-generator II 1, and aryl borate compound III 1 part were dissolved in 100 parts mixts. comprising CH<sub>2</sub>:CMeCO<sub>2</sub>(CH<sub>2</sub>)<sub>10</sub>CH(CO<sub>2</sub>H)<sub>2</sub> 30, CH<sub>2</sub>:CMeCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OP(O)(OH)OCH<sub>2</sub>CH<sub>2</sub>OCOCMe:CH<sub>2</sub> 20, [p-CH<sub>2</sub>:CMeCO<sub>2</sub>CH<sub>2</sub>CH(OH)CH<sub>2</sub>OC<sub>6</sub>H<sub>4</sub>]<sub>2</sub>CMe<sub>2</sub> 20, and CH<sub>2</sub>:CMeCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH 30 parts to give a photopolymerizable adhesive, which showed good bonding strength between dental composite resin and enamel or dentin.

IT 198016-97-6P 198016-98-7P 198017-00-4P  
198017-01-5P

(photopolymn. initiators with high sensitivity to visible ray for (meth)acrylate-based adhesives for dental uses)

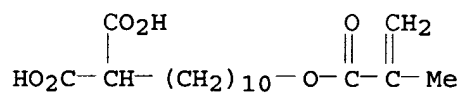
RN 198016-97-6 HCAPLUS

CN Propanedioic acid, [10-[(2-methyl-1-oxo-2-propenyl)oxy]decyl]-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bis(2-methyl-2-propenoate) and phosphinicobis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 108362-85-2

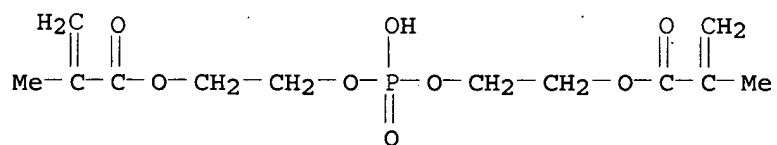
CMF C17 H28 O6



CM 2

CRN 32435-46-4

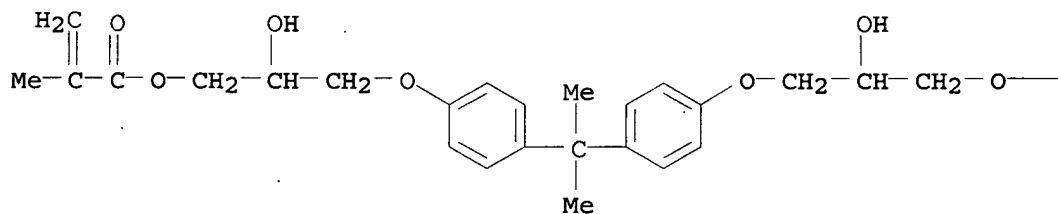
CMF C12 H19 O8 P



CM 3

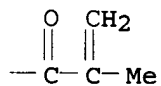
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CMF C29 H36 O8



PAGE 1-A

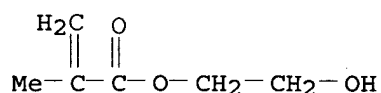
PAGE 1-B



CM 4

CRN 868-77-9

CMF C6 H10 O3



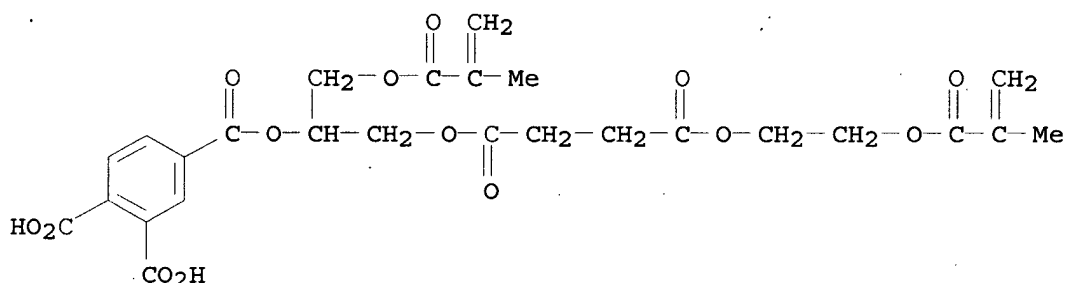
RN 198016-98-7 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, 4-[2-[4-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]-1,4-dioxobutoxy]-1-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]ethyl] ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and phosphinicobis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 144571-65-3

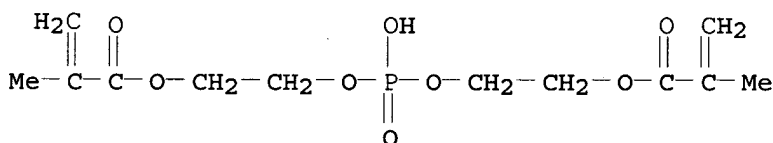
CMF C26 H28 O14



CM 2

CRN 32435-46-4

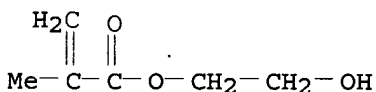
CMF C12 H19 O8 P



CM 3

CRN 868-77-9

CMF C6 H10 O3



RN 198017-00-4 HCAPLUS

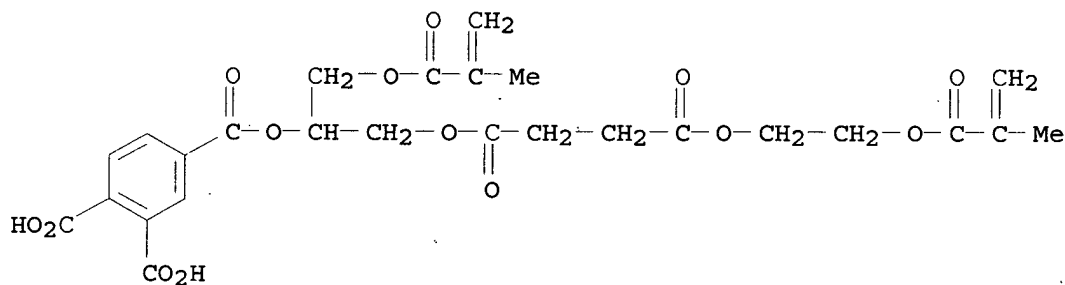
CN 1,2,4-Benzenetricarboxylic acid, 4-[2-[4-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]-1,4-dioxobutoxy]-1-[[[(2-methyl-1-oxo-2-

propenyl)oxy]methyl]ethyl] ester, polymer with  
 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate),  
 2-hydroxyethyl 2-methyl-2-propenoate and phosphinicobis(oxy-2,1-  
 ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 144571-65-3

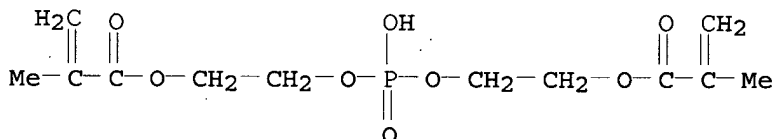
CMF C26 H28 O14



CM 2

CRN 32435-46-4

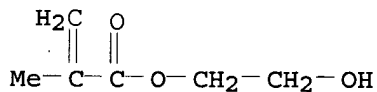
CMF C12 H19 O8 P



CM 3

CRN 868-77-9

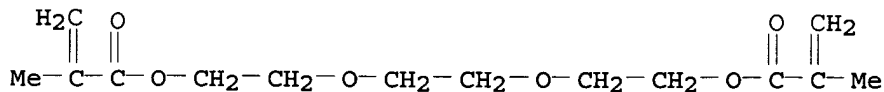
CMF C6 H10 O3



CM 4

CRN 109-16-0

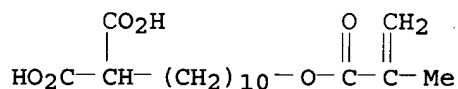
CMF C14 H22 O6



RN 198017-01-5 HCAPLUS  
 CN Propanedioic acid, [10-[(2-methyl-1-oxo-2-propenyl)oxy]decyl]-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and phosphinobis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

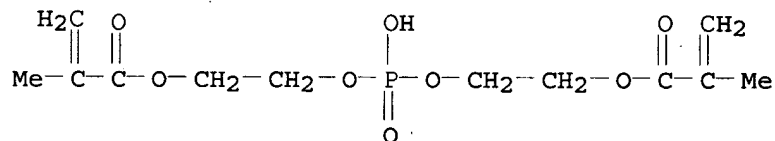
CM 1

CRN 108362-85-2  
 CMF C17 H28 O6



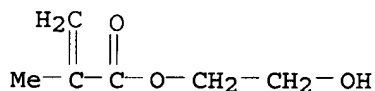
CM 2

CRN 32435-46-4  
 CMF C12 H19 O8 P



CM 3

CRN 868-77-9  
 CMF C6 H10 O3



IC ICM C08F004-52  
 ICS A61K006-083; C08F002-50; C09J133-08  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 38  
 IT 198016-97-6P 198016-98-7P 198016-99-8P  
 198017-00-4P 198017-01-5P  
 (photopolymer. initiators with high sensitivity to visible ray for (meth)acrylate-based adhesives for dental uses)

L19 ANSWER 36 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1996:743865 HCAPLUS  
 DOCUMENT NUMBER: 126:11555  
 TITLE: Color-stable dental restorative materials  
 INVENTOR(S): Weitao, Jia; Arun, Prasad  
 PATENT ASSIGNEE(S): Jeneric/Pentron Incorporated, USA

SOURCE: Eur. Pat. Appl., 8 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE               |
|---|------|----------|-----------------|--------------------|
| EP 742001   | A2   | 19961113 | EP 1996-420169  | 1996<br>0510       |
| EP 742001   | A3   | 19970319 |                 |                    |
| EP 742001   | B1   | 20030108 |                 |                    |
| R: AT, BE, CH, DE, ES, FR, GB, GR, IE, IT, LI, NL, SE |      |          |                 |                    |
| CA 2176322  | AA   | 19961112 | CA 1996-2176322 | 1996<br>0510       |
| CA 2176322  | C    | 19991012 |                 |                    |
| AT 230586   | E    | 20030115 | AT 1996-420169  | 1996<br>0510       |
| JP 09100208   | A2   | 19970415 | JP 1996-140981  | 1996<br>0511       |
| US 5684103  | A    | 19971104 | US 1997-829146  | 1997<br>0331       |
| PRIORITY APPLN. INFO.:                                |      |          | US 1995-439276  | A<br>1995<br>0511  |
|   |      |          | US 1996-698477  | B1<br>1996<br>0815 |

OTHER SOURCE(S): MARPAT 126:11555

AB Storage-stable dental restorative materials are provided which are not prone to discoloration upon aging. These compns. use bisazo initiators of thermal polymerization in place of the usual peroxide initiators. The initiators have structure RN:NR' (R, R' = O-free aliphatic, cycloaliph., aromatic, and heterocyclic moieties). Thus, a monomeric matrix was prepared containing triethylene glycol dimethacrylate 40, urethane dimethacrylate 35, 2-hydroxyethyl methacrylate/triethylene glycol bis(chloroformate) copolymer 25, 1,1'-azobis(cyanocyclohexane) (photopolymn. initiator) 2.0, 2-(2-hydroxy-5-tert-octylphenyl)benzotriazole 0.75, BHT 0.05, and 2,2'-(2,5-thiophenediyl)bis(5-tert-butylbenzoxazole) 0.01 g. This matrix 25, Ba borosilicate glass (particle size 0.6 µm, silane content .apprx.6.5%) 70, and colloidal fumed silica 5 weight% were combined to a filled composite paste. This paste showed no change in color after aging at 37° for 2 wk or 1 mo.

IT 184101-19-7

(bisazo initiators for color-stable polymeric dental restorative materials)

RN 184101-19-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediylbis(oxy-2,1-ethanediyl) ester, polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(carbonochloridate), 2-hydroxyethyl 2-methyl-2-propenoate and



7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahehexadecane-1,16-diyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

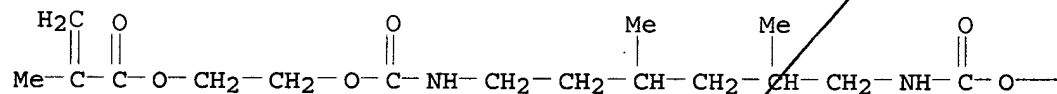
CM 1

CRN 72869-86-4

CMF C23 H38 N2 O8

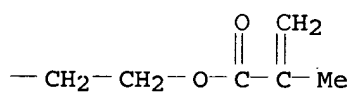
CCI IDS

PAGE 1-A



Dl-Me

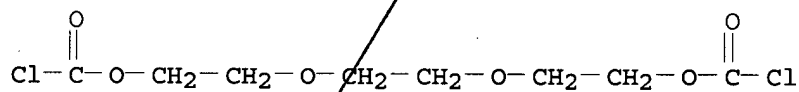
PAGE 1-B



CM 2

CRN 17134-17-7

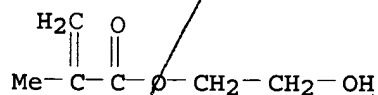
CMF C8 H12 Cl2 O6



CM 3

CRN 868-77-9

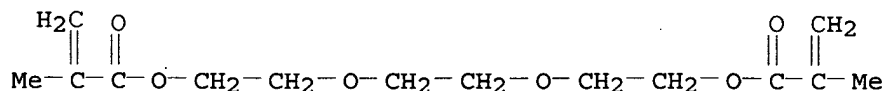
CMF C6 H10 O3



CM 4

CRN 109-16-0

CMF C14 H22 O6



IC ICM A61K006-083  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 37  
 IT 79-41-4D, esters, polymers 184101-19-7 184101-20-0  
 (bisazo **initiators** for color-stable polymeric dental  
 restorative materials)

L19 ANSWER 37 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:178995 HCAPLUS  
 DOCUMENT NUMBER: 124:262984  
 TITLE: Pressure-sensitive acrylic adhesive tapes and  
 their manufacture  
 INVENTOR(S): Takahashi, Satoshi; Araki, Noboru  
 PATENT ASSIGNEE(S): Sony Chemicals, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 07331198 | A2   | 19951219 | JP 1994-142358  | 1994<br>0531 |
| JP 3493731  | B2   | 20040203 | JP 1994-142358  | 1994<br>0531 |

PRIORITY APPLN. INFO.: JP 1994-142358

AB Compns. containing acrylic acid esters of C4-14 alkyl alcs., copolymerizable monomers, polyfunctional oligoacrylates with mol. weight (Mw) ≥300, and photopolymer. initiators are coated on substrate sheets and two-stage irradiated, with stronger irradiation in second stage, to give title tapes with good heat resistance. Thus, 2-ethylhexyl acrylate 90, acrylic acid 10, and acrylic rubber 5 g were mixed for 48 h, blended with 0.0005 mol Kayarad MANDA with Mw 312 and 0.02 g 2-hydroxy-2-methyl-1-phenylpropan-1-one, coated on a release paper, laminated with a polyester film, irradiated with 2.00 mW/cm<sup>2</sup> for 60 s and 35.5 mW/cm<sup>2</sup> for 30 s to give a test piece showing polymerization degree 99.9% and good heat resistance (JIS Z 0237) and peeling resistance under load.

IT 175079-30-8P, Acrylic acid-2-ethylhexyl acrylate-Kayarad MANDA copolymer  
 (heat-resistant, pressure-sensitive adhesive tapes prepared by irradiation of acrylate monomers, oligoacrylates and photopolymer. initiators)

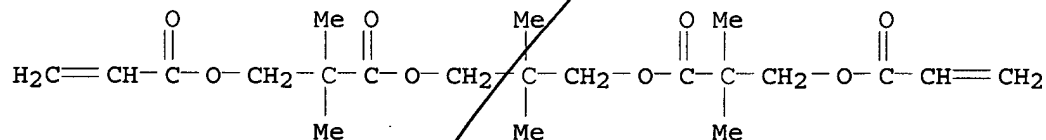
RN 175079-30-8 HCAPLUS

CN 2-Propenoic acid, polymer with (2,2-dimethyl-1,3-propanediyl)bis[oxy(2,2-dimethyl-3-oxo-3,1-propanediyl)] di-2-propenoate and 2-ethylhexyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 90780-31-7

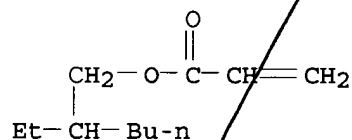
CMF C21 H32 O8



CM 2

CRN 103-11-7

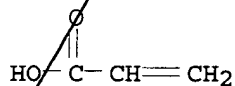
CMF C11 H20 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



IC ICM C09J007-02

ICS C09J007-02; C09J004-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37

IT 175079-30-8P, Acrylic acid-2-ethylhexyl acrylate-Kayarad  
MANDA copolymer(heat-resistant, pressure-sensitive adhesive tapes prepared by  
irradiation of acrylate monomers, oligoacrylates and  
photopolymer. initiators)

L19 ANSWER 38 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:124104 HCAPLUS

DOCUMENT NUMBER: 124:274626

TITLE: Photosensitive liquid, photosensitive element,  
and manufacture of color filterINVENTOR(S): Tachiki, Shigeo; Kobayashi, Juji; Sasaki,  
Shoichi; Yamazaki, Koji; Akahori, Satohiko;  
Sato, Tsutomu; Kimura, Yoichi

PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 07319161 | A2   | 19951208 | JP 1994-115089  | 1994<br>0527 |
| JP 3421428  | B2   | 20030630 | JP 1994-115089  | 1994<br>0527 |

PRIORITY APPLN. INFO.: JP 1994-115089

AB The title liquid with thixotropy (viscosity at 1 rpm)/(viscosity at 5 rpm) = 1.00-1.50 as determined with E-type viscosimeter contains (a) a colored image-forming material containing a disperse resin with acid value 20-300 and unsatd. value 600-3000, a pigment, a monomer containing  $\geq 1$  photopolymerizable unsatd. bond, and a photoinitiator and (b) an organic solvent. The title photosensitive element contains a layer containing the color image-forming material and a support film. The title manufacture giving a color image comprises forming the material film on a support, exposing to an active ray, photocuring, developing, and repeating the steps for every color.

IT 175342-48-0 175519-31-0  
 (photosensitive liquid containing disperse resin, photopolymerizable monomer, and **initiator**, **photosensitive** element, and manufacture of color filter)

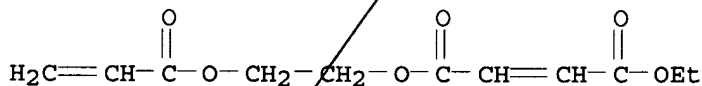
RN 175342-48-0 HCAPLUS

CN 2-Butenedioic acid, ethyl 2-[(1-oxo-2-propenyl)oxy]ethyl ester, polymer with ethyl hydrogen 2-butenedioate and 1-methyl-4-(1-methylethenyl)benzene (9CI) (CA INDEX NAME)

CM 1

CRN 175342-47-9

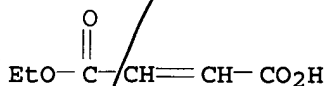
CMF C11 H14 O6



CM 2

CRN 3249-53-4

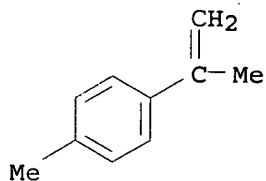
CMF C6 H8 O4



CM 3

CRN 1195-32-0

CMF C10 H12



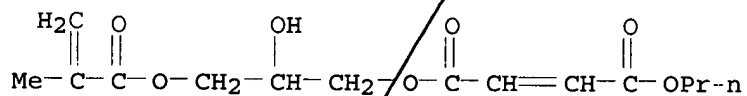
RN 175519-31-0 HCAPLUS

CN 2-Butenedioic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl propyl ester, polymer with 1-ethenyl-4-methylbenzene and propyl hydrogen 2-butenedioate (9CI)  
(CA INDEX NAME)

CM 1

CRN 175519-30-9

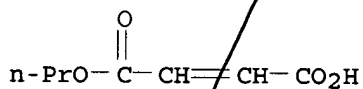
CMF C14 H20 O7



CM 2

CRN 147320-62-5

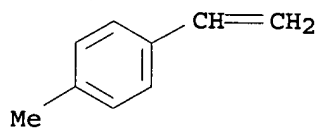
CMF C7 H10 O4



CM 3

CRN 622-97-9

CMF C9 H10



IC ICM G03F007-033

ICS G02B005-20; G03F007-004; G03F007-027; G03F007-11

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 2223-82-7, Neopentyl glycol diacrylate 2358-84-1, Diethylene glycol dimethacrylate 4491-03-6D, Bisphenol A diacrylate, ethoxylated 15625-89-5, Trimethylolpropane triacrylate 17831-71-9, Tetraethylene glycol diacrylate 30231-38-0, Acrylic acid-glycidyl methacrylate-methyl methacrylate copolymer 175342-48-0 175519-31-0  
(photosensitive liquid containing disperse resin, photopolymerizable monomer, and **initiator**, **photosensitive** element, and manufacture of color filter)

L19 ANSWER 39 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:838921 HCAPLUS

DOCUMENT NUMBER: 124:10189

TITLE: Photocurable unsaturated polyester compositions

INVENTOR(S): Aoki, Tomoaki; Fujishima, Minoru; Yashiro, Noboru; Masuda, Shunji

PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

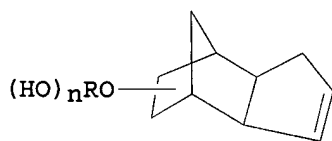
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE         |
|------------------------|------|----------|-----------------|--------------|
| -----                  | ---- | -----    | -----           |              |
| JP 07179583            | A2   | 19950718 | JP 1993-325616  | 1993<br>1224 |
| JP 3413263             | B2   | 20030603 |                 |              |
| PRIORITY APPLN. INFO.: |      |          | JP 1993-325616  | 1993<br>1224 |

GI



I

AB The compns. contain (a) 100 parts unsatd. polyesters (acid value 0-70), obtained by treatment of dicyclopentadiene hydroxy ethers I (R = aromatic group, C2-25 aliphatic group; n = 1, 2) (X) with saturated and/or unsatd. polybasic acids (Y) at equivalent ratio X:Y = 1:(0.5-4.0) to give esters (Z) with acid value 30-300 and treatment of Z with unsatd. epoxides (W) at (acid equivalent of Z):(epoxy equivalent of W) = 1:(2.0-0.5), optionally mixed with up to an equal weight of reactive diluents with flash point  $\geq 70^\circ$ , and (b) 0.01-10 parts photopolymn. initiators. The compns. are useful for coating materials, adhesives, inks, elec. insulating materials, etc. Thus, 300 g ester, prepared by

treatment of 200 g 1:1 addition product of dicyclopentadiene and ethylene glycol with 98 g maleic anhydride, was treated with 150 g glycidyl methacrylate to give an unsatd. polyester, 85 parts of which was dissolved in 15 parts p-tert-butylstyrene and coated and photocured on plates using benzil di-Me ketal to give films with good hardness and adhesion.

IT 171440-04-3P

(photocurable dicyclopentadiene-containing unsatd. ester compns. containing reactive diluents and polymerization initiators)

RN 171440-04-3 HCAPLUS

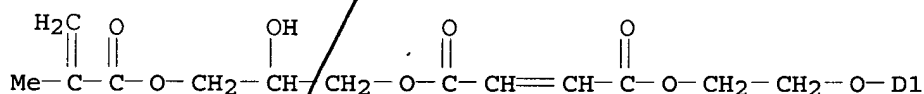
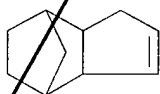
CN 2-Butenedioic acid (2Z)-, 2-[[3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl]oxy]ethyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 171440-03-2

CMF C23 H30 O8

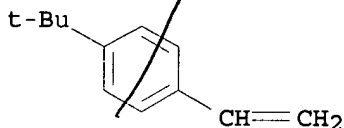
CCI IDS



CM 2

CRN 1746-23-2

CMF C12 H16



IT 171440-05-4P 171440-10-1P 171527-94-9P

171527-95-0P 171599-71-6P

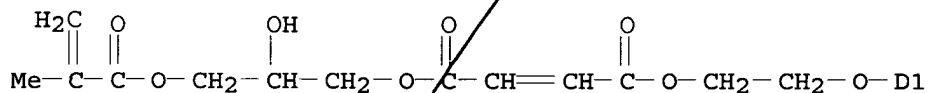
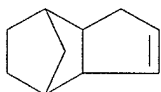
(photocurable dicyclopentadiene-containing unsatd. polyester compns. containing reactive diluents and polymerization initiators)

RN 171440-05-4 HCAPLUS

CN 2-Butenedioic acid (2Z)-, 2-[[3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl]oxy]ethyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 4-(1-oxo-2-propenyl)morpholine (9CI) (CA INDEX NAME)

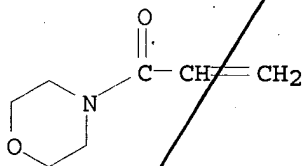
CM 1

CRN 171440-03-2  
 CMF C23 H30 O8  
 CCI IDS



CM 2

CRN 5117-12-4  
 CMF C7 H11 N O2

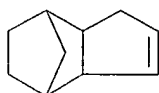


RN 171440-10-1 HCAPLUS  
 CN 4-Cyclohexene-1,2-dicarboxylic acid, methyl-, 2-[[3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl]oxy]methylethyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-[[3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl]oxy]methylethyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl (2Z)-2-butenedioate and 4-(1-oxo-2-propenyl)morpholine (9CI) (CA INDEX NAME)

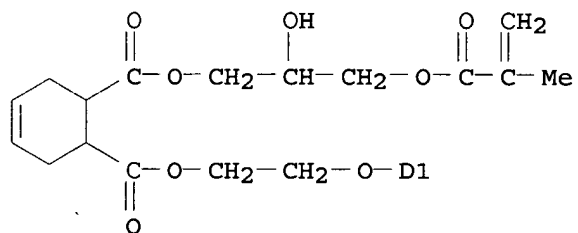
CM 1

CRN 171440-09-8  
 CMF C29 H40 O8  
 CCI IDS





2 ( D1-Me )

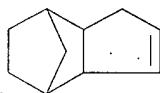


CM 2

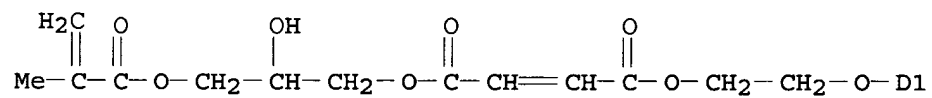
CRN 171440-07-6

CMF C24 H32 O8

CCI IDS



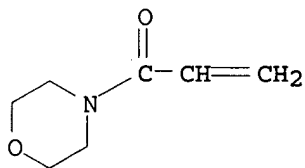
D1-Me



CM 3

CRN 5117-12-4

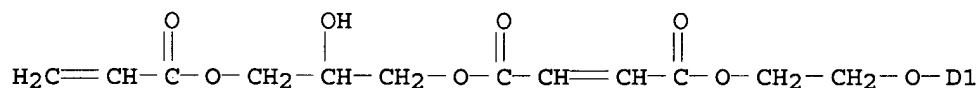
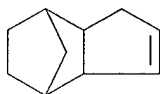
CMF C7 H11 N O2



RN 171527-94-9 HCAPLUS  
 CN 2-Butenedioic acid (2Z)-, 2-[[[3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl]oxy]ethyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 1-(1,1-dimethylethyl)-4-ethenylbenzene, 2-[[[3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl]oxy]ethyl 2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propyl (2Z)-2-butenedioate and 4-(1-oxo-2-propenyl)morpholine (9CI) (CA INDEX NAME)

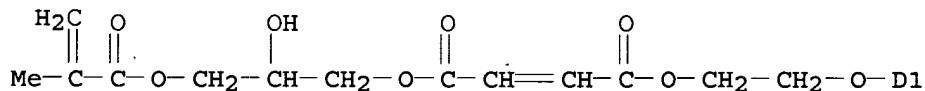
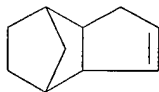
CM 1

CRN 171527-93-8  
 CMF C22 H28 O8  
 CCI IDS



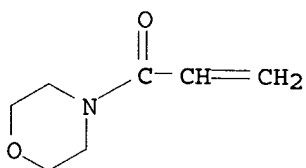
CM 2

CRN 171440-03-2  
 CMF C23 H30 O8  
 CCI IDS



CM 3

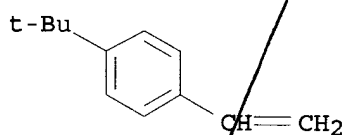
CRN 5117-12-4  
 CMF C7 H11 N O2



CM 4

CRN 1746-23-2

CMF C12 H16



RN 171527-95-0 HCAPLUS

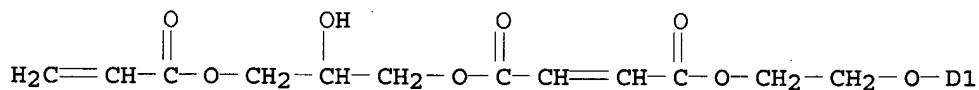
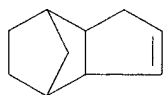
CN 2-Butenedioic acid (2Z)-, 2-[[3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl]oxy]ethyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-ethyl-2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl bis(2-methyl-2-propenoate) and 2-[[3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl]oxy]ethyl 2-hydroxy-3-(2-propenyloxy)propyl (2Z)-2-butenedioate (9CI) (CA INDEX NAME)

CM 1

CRN 171527-93-8

CMF C22 H28 O8

CCI IDS

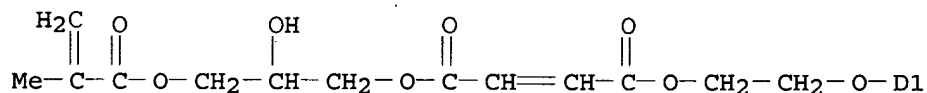
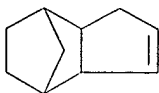


CM 2

CRN 171440-03-2

CMF C23 H30 O8

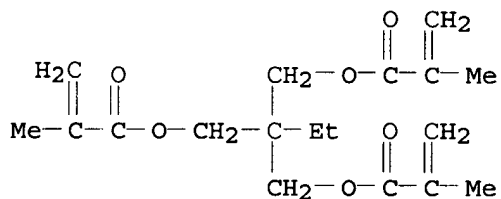
CCI IDS



CM 3

CRN 3290-92-4

CMF C18 H26 O6



RN 171599-71-6 HCAPLUS

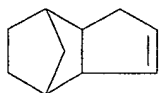
CN 4-Cyclohexene-1,2-dicarboxylic acid, methyl-, 2-[[3a,4,5,6,7,7a-hexahydro-1H-inden-5(or 6)-yl]oxy]methylethyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 1-(1,1-dimethylethyl)-4-ethenylbenzene and 2-[[3a,4,5,6,7,7a-hexahydro-1H-inden-5(or 6)-yl]oxy]methylethyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl (2Z)-2-butenedioate (9CI) (CA INDEX NAME)

CM 1

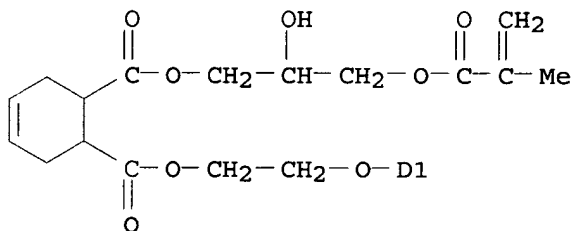
CRN 171440-09-8

CMF C29 H40 O8

CCI    IDS



2 ( D1-Me )

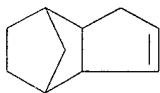


CM 2

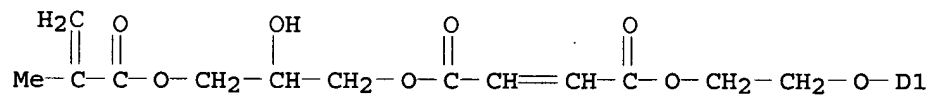
CRN 171440-07-6

CMF C24 H32 O8

CCI IDS



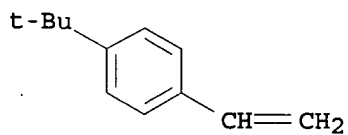
D1-Me



CM 3

CRN 1746-23-2

CMF C12 H16



IC ICM C08G063-58

ICS C08F002-48; C08F283-01  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 42  
 IT 171440-04-3P  
 (photocurable dicyclopentadiene-containing unsatd. ester compns.  
 containing reactive diluents and polymerization **initiators**)  
 IT 171440-05-4P 171440-10-1P 171527-94-9P  
 171527-95-0P 171599-71-6P  
 (photocurable dicyclopentadiene-containing unsatd. polyester  
 compns. containing reactive diluents and polymerization **initiators**  
 )

L19 ANSWER 40 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:468768 HCAPLUS  
 DOCUMENT NUMBER: 123:114045  
 TITLE: Preparation of vinyl chloride copolymer  
 compositions with excellent heat resistance  
 and moldability  
 INVENTOR(S): Takada, Kuniaki; Shimada, Kazunori; Tsuboi,  
 Katsufumi; Arita, Masatoshi  
 PATENT ASSIGNEE(S): Sun Arrow Kagaku Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 07010936 | A2   | 19950113 | JP 1992-79120   | 1992<br>0229 |
| JP 3174126  | B2   | 20010611 | JP 1992-79120   | 1992<br>0229 |

PRIORITY APPLN. INFO.:

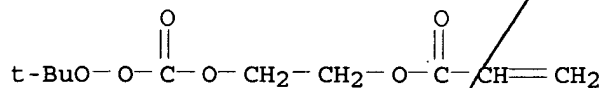
AB The compns. are prepared by (co)polymerizing 100 parts aromatic monomers or their mixts. with other comonomers with 0.01-4 parts chain-transfer agents in the presence of vinyl chloride (I) polymers having polymerization initiation groups. Thus, 12 g CH<sub>2</sub>:CHCH<sub>2</sub>OC(O)O<sub>2</sub>CMe<sub>3</sub> and 1000 g I were polymerized to obtain a copolymer, 500 g of which was polymerized with 500 g styrene and 5 g dodecyl mercaptan to obtain a graft copolymer. A composition containing 30 parts the graft copolymer and 70 parts PVC showed Vicat softening temperature 85°, tensile strength 610 kg/cm<sup>2</sup>, and good moldability.

IT 166521-64-8P  
 (graft polymerization of aromatic monomers onto **initiator**  
 -containing PVC for good heat resistance and moldability)  
 RN 166521-64-8 HCAPLUS  
 CN 2-Propenoic acid, 2-[[[(1,1-dimethylethyl)dioxy]carbonyl]oxy]ethyl  
 ester, polymer with chloroethene, ethenylbenzene and  
 (1-methylethenyl)benzene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 41892-40-4

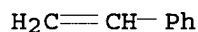
CMF C10 H16 O6



CM 2

CRN 100-42-5

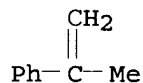
CMF C8 H8



CM 3

CRN 98-83-9

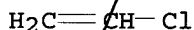
CMF C9 H10



CM 4

CRN 75-01-4

CMF C2 H3 Cl



IC ICM C08F259-04

ICS C08F293-00

CC 37-6 (Plastics Manufacture and Processing)

IT 106733-64-6P, Methyl methacrylate-styrene-vinyl chloride graft copolymer 109327-26-6P, Butyl acrylate-styrene-vinyl chloride graft copolymer 114664-48-1P 124262-29-9P, Acrylonitrile-styrene-vinyl chloride graft copolymer 166521-59-1P 166521-60-4P 166521-61-5P 166521-62-6P 166521-63-7P **166521-64-8P**

(graft polymerization of aromatic monomers onto **initiator** -containing PVC for good heat resistance and moldability)

L19 ANSWER 41 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:350389 HCAPLUS

DOCUMENT NUMBER: 122:119021

TITLE: Durable electrophotographic lithographic master

INVENTOR(S): Kato, Eiichi; Tashiro, Hiroshi; Ishii, Kazuo

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 67 pp.

DOCUMENT TYPE: CODEN: JKXXAF  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 Japanese  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 06130707 | A2   | 19940513 | JP 1992-301568  | 1992<br>1015 |

PRIORITY APPLN. INFO.: JP 1992-301568

1992  
1015

AB The title master contains photoconductive layer containing photoconductive compds. and binder resins on an elec. conductive support, and a surface layer, wherein the surface layer contains binders comprising copolymers of (A) components having functional groups forming carboxy group by chemical reaction, (B) components containing functional groups forming SO<sub>3</sub>H, SO<sub>2</sub>H, PO<sub>3</sub>H<sub>2</sub> by the above reaction, and (C) heat and/or photocurable components, and the binders in the photoconductive layer are AB or ABA block copolymers (Mw 1000-20,000) of block A containing CH(a<sub>1</sub>)C(a<sub>2</sub>)CO<sub>2</sub>R<sub>1</sub> units (a<sub>1</sub>, a<sub>2</sub> = H, halogen, cyano; R<sub>1</sub> = hydrocarbyl) and block B containing components containing polar group(s) chosen from PO<sub>3</sub>H<sub>2</sub>, SO<sub>3</sub>H, CO<sub>2</sub>H, P(O)(OH)R<sub>2</sub> (R<sub>2</sub> = hydrocarbyl, hydrocarbyloxy), and cyclic acid anhydride group.

IT 149234-99-1P

(initiators for manufacture of block star copolymer)

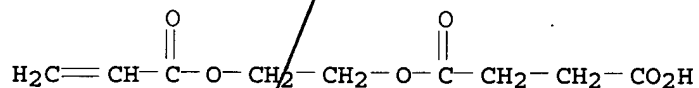
RN 149234-99-1 HCAPLUS

CN Butanedioic acid, mono[2-[(1-oxo-2-propenyl)oxy]ethyl] ester, polymer with ethenyl acetate, methyl 2-propenoate and phenylmethyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 50940-49-3

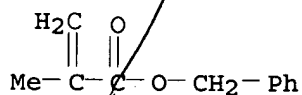
CMF C9 H12 O6



CM 2

CRN 2495-37-6

CMF C11 H12 O2





CM 3

CRN 108-05-4

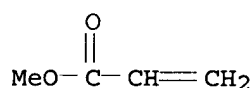
CMF C4 H6 O2



CM 4

CRN 96-33-3

CMF C4 H6 O2



IC ICM G03G005-147

ICS G03G005-05; G03G005-06; G03G005-08; G03G005-09; G03G013-28

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 149234-98-0P 149234-99-1P 155247-19-1P 160876-06-2P

(initiators for manufacture of block star copolymer)

L19 ANSWER 42 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:284868 HCAPLUS

DOCUMENT NUMBER: 120:284868

TITLE: Electrophotographic photoreceptor

INVENTOR(S): Kato, Eiichi; Ishii, Kazuo

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: PCT Int. Appl., 262 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE         |
|--|------|----------|-----------------|--------------|
| WO 9220015   | A1   | 19921112 | WO 1992-JP579   | 1992<br>0501 |
| W: US  |      |          |                 |              |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE |      |          |                 |              |
| JP 04330448  | A2   | 19921118 | JP 1991-128343  | 1991<br>0502 |
| JP 3112698   | B2   | 20001127 |                 |              |
| JP 04355766  | A2   | 19921209 | JP 1991-157432  | 1991<br>0603 |
| JP 3112703   | B2   | 20001127 |                 |              |
| JP 05040349  | A2   | 19930219 | JP 1991-221296  | 1991<br>0807 |

|                        |    |          |                |   |      |
|------------------------|----|----------|----------------|---|------|
| JP 3112718             | B2 | 20001127 |                |   |      |
| JP 05072754            | A2 | 19930326 | JP 1991-260530 |   | 1991 |
|                        |    |          |                |   | 0912 |
| JP 05142794            | A2 | 19930611 | JP 1991-329619 |   | 1991 |
|                        |    |          |                |   | 1120 |
| JP 05142796            | A2 | 19930611 | JP 1991-332887 |   | 1991 |
|                        |    |          |                |   | 1122 |
| JP 05281762            | A2 | 19931029 | JP 1992-105252 |   | 1992 |
|                        |    |          |                |   | 0401 |
| JP 3214672             | B2 | 20011002 |                |   |      |
| EP 584359              | A1 | 19940302 | EP 1992-909663 |   | 1992 |
|                        |    |          |                |   | 0501 |
| EP 584359              | B1 | 19981028 |                |   |      |
| R: DE, GB              |    |          |                |   |      |
| US 5573879             | A  | 19961112 | US 1993-146001 |   | 1993 |
|                        |    |          |                |   | 1102 |
| PRIORITY APPLN. INFO.: |    |          | JP 1991-128343 | A | 1991 |
|                        |    |          |                |   | 0502 |
|                        |    |          | JP 1991-157432 | A | 1991 |
|                        |    |          |                |   | 0603 |
|                        |    |          | JP 1991-221296 | A | 1991 |
|                        |    |          |                |   | 0807 |
|                        |    |          | JP 1991-260530 | A | 1991 |
|                        |    |          |                |   | 0912 |
|                        |    |          | JP 1991-329619 | A | 1991 |
|                        |    |          |                |   | 1120 |
|                        |    |          | JP 1991-332887 | A | 1991 |
|                        |    |          |                |   | 1122 |
|                        |    |          | JP 1992-105252 | A | 1992 |
|                        |    |          |                |   | 0401 |
|                        |    |          | WO 1992-JP579  | W | 1992 |
|                        |    |          |                |   | 0501 |

AB In the title electrophotog. photoreceptor utilizing a photoconductor layer containing an inorg. photoconductor, a spectral sensitizer dye, and a binder resin, the binder resin is a blend of Resin (A) and Resin (B). Resin (A) [weight average mol. weight 1 + 103 - 2 + 104] contains the polymer component CHa1Ca2(CO2R) (I) [A1,A2 = H, halo, CN, hydrocarbon moiety, CO2R3, COR3 via a

hydrocarbon group; R = hydrocarbyl]  $\geq 30\%$  and a polymer component containing  $\geq 1$  type of polar groups [PO3A2, SO3H, CO2H, P(O)(OH)R1 (R1 = hydrocarbon or oxyhydrocarbon), cyclic acid anhydride] 0.5-15%. Resin (B) (weight average mol. weight  $3 \times 10^4 - 1 \times 10^6$ ) is a star-type polymer containing  $\geq 3$  polymer chains based on the polymer component of Resin (A) (0.01-10%) containing polar substituents and the polymer component (I) of Resin (A) ( $\geq 30\%$ ) within an aq mol. The photoreceptor shows improved electrostatic and image pickup characteristics, and is especially useful in the reproduction of precise images using a liquid developer.

IT 152792-46-6P

(preparation of, star, by using dithiocarbamate-type initiator, for binder resin)

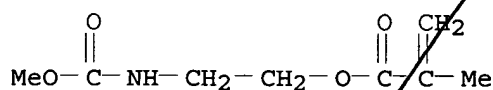
RN 152792-46-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[(methoxycarbonyl)amino]ethyl ester, polymer with methyl 2-methyl-2-propenoate, methyl 2-propenoate and phenylmethyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 104357-38-2

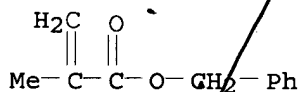
CMF C8 H13 N O4



CM 2

CRN 2495-37-6

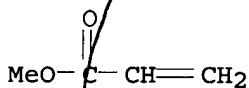
CMF C11 H12 O2



CM 3

CRN 96-33-3

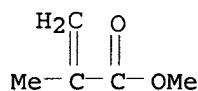
CMF C4 H6 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03G005-05  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 152792-46-6P  
 (preparation of, star, by using dithiocarbamate-type initiator, for binder resin)

L19 ANSWER 43 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1994:273201 HCAPLUS  
 DOCUMENT NUMBER: 120:273201  
 TITLE: Low toxicity radiation-curable polyester varnishes for wood or printed paper  
 INVENTOR(S): Nahm, Steven H.  
 PATENT ASSIGNEE(S): Hercules Inc., USA  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.                            | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------------------------------|------|----------|-----------------|--------------|
| US 5254603                            | A    | 19931019 | US 1990-633735  | 1990<br>1224 |
| PRIORITY APPLN. INFO.: US 1990-633735 |      |          |                 | 1990<br>1224 |

AB Title varnishes comprise 35-45% polyesters containing  $\geq 2$  vinyl groups, 24-48% (poly)vinyl carboxylates, 2-6% benzoyl cyclohexanol or isopropanol initiators, and 15-25% nitrocellulose. A composition containing PolyLite 92-835 (unsatd. polyester), divinyl adipate, 10% nitrocellulose, and 4% Darocure 1173 was photo-cured to show 90% unextractable content and gave films with Konig hardness 41.

IT 154360-38-0 154460-42-1 154799-84-5  
 (coatings, containing nitrocellulose and specific initiators, photo-curable, for wood or printed paper)

RN 154360-38-0 HCAPLUS

CN 5,8,11,14-Tetraoxaoctadeca-2,16-dienedioic acid, trimethyl-4,15-dioxo-, dimethyl ester, (Z,Z)-, polymer with ethenyl acetate (9CI) (CA INDEX NAME)

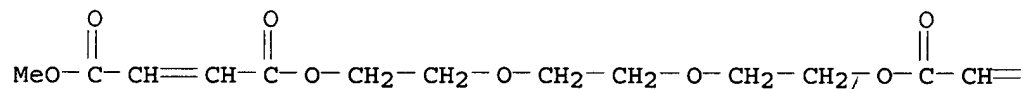
CM 1

CRN 154360-37-9

CMF C19 H28 O10

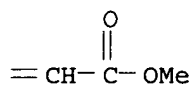
CCI IDS

PAGE 1-A



3 ( D1-Me )

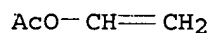
PAGE 1-B



CM 2

CRN 108-05-4

CMF C4 H6 O2



RN 154460-42-1 HCAPLUS

CN Hexanedioic acid, diethenyl ester, polymer with  
(Z,Z)-(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)]  
bis(methyl 2-butenedioate) (9CI) (CA INDEX NAME)

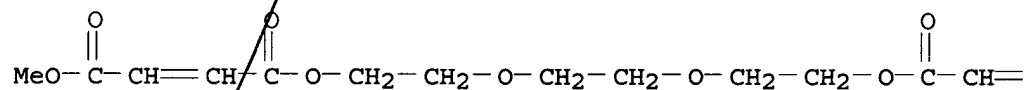
CM 1

CRN 154360-37-9

CMF C19 H28 O10

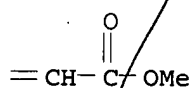
CCI IDS

PAGE 1-A



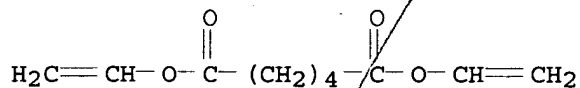
3 ( D1-Me )

PAGE 1-B



CM 2

CRN 4074-90-2  
CMF C10 H14 O4



RN 154799-84-5 HCAPLUS  
CN 2-Butenedioic acid (2Z)-, (methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] dimethyl ester, polymer with ethenyl acetate and PolyLite 92-835 (9CI) (CA INDEX NAME)

CM 1

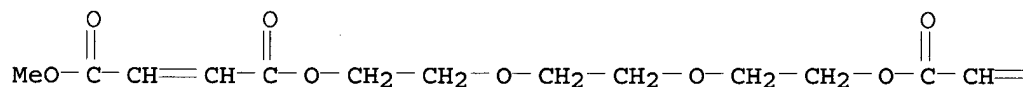
CRN 154362-60-4  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

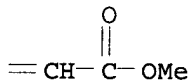
CRN 154360-37-9  
CMF C19 H28 O10  
CCI IDS

PAGE 1-A



3 (D1-Me)

PAGE 1-B



CM 3

CRN 108-05-4  
CMF C4 H6 O2



IC ICM C08K005-16  
INCL 522072000

CC 42-8 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 43  
 IT 154360-38-0 154360-40-4 154430-11-2  
 154460-42-1 154718-73-7 154718-74-8 154718-75-9  
 154718-76-0 154799-84-5  
 (coatings, containing nitrocellulose and specific  
 initiators, photo-curable, for wood or  
 printed paper)

L19 ANSWER 44 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:218758 HCAPLUS

DOCUMENT NUMBER: 120:218758

TITLE: Grafting onto carbon black having few  
 functional group. (8). Radical graft  
 polymerization of vinyl monomers from porous  
 carbon black initiated by peroxide polymer  
 retained in the pores

AUTHOR(S): Tsubokawa, Norio; Tsuchida, Hideyo; Kobayashi,  
 Kiyotaka

CORPORATE SOURCE: Fac. Eng., Niigata Univ., Niigata, 950-21,  
 Japan

SOURCE: Shikizai Kyokaishi (1993), 66(5), 280-5  
 CODEN: SKYOAO; ISSN: 0010-180X

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB The studies on the grafting of vinyl monomers on porous carbon  
 black showed that a grafting weight increase of 55-60% was obtained  
 by first forming a copolymer (I) having pendant peroxy groups in  
 the pores of carbon black by copolymerizing Me methacrylate (II) with  
 tert-butylperoxy 2-(methacryloyloxy)ethyl carbonate at 80°  
 in the presence of AIBN and grafting the surface of carbon black  
 with styrene or II in the presence of I. The grafted carbon black  
 showed good dispersion stability in a good solvent for the grafted  
 polymer for a long period.

IT 119141-15-0  
 (initiator, for grafting of styrene or Me  
 methacrylate on porous carbon black)

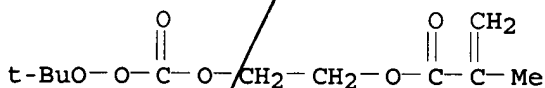
RN 119141-15-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[(1,1-  
 dimethylethyl)dioxy]carbonyl]oxy]ethyl ester, polymer with methyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 41892-41-5

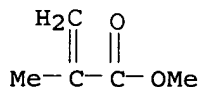
CMF C11 H18 O6



CM 2

CRN 80-62-6

CMF C5 H8 O2



CC 35-8 (Chemistry of Synthetic High Polymers)  
 IT 119141-15-0  
 (initiator, for grafting of styrene or Me  
 methacrylate on porous carbon black)

L19 ANSWER 45 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:137282 HCAPLUS

DOCUMENT NUMBER: 120:137282

TITLE: Photo-curable epoxy acrylate resin clear top  
 coat compositions for aqueous colored base  
 coats

INVENTOR(S): Kashiwada, Seiichi; Okamoto, Nobuyuki; Wakimoto,  
 Mitsuo; Seko, Kenji

PATENT ASSIGNEE(S): Kansai Paint Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE           |
|------------------------|------|----------|-----------------|----------------|
| -----                  | ---- | -----    | -----           | -----          |
| JP 05161870            | A2   | 19930629 | JP 1991-353280  | 1991<br>1216   |
| PRIORITY APPLN. INFO.: |      |          |                 | 1991<br>1216   |
|                        |      |          |                 | JP 1991-353280 |

AB Title clear compns. contain epoxy-containing resins and photochem.  
 cationic polymerization initiators. A substrate was sprayed with an aqueous  
 composition containing 3-methacryloxypropyltrimethoxysilane-styrene-Me  
 methacrylate-Bu acrylate-hydroxypropyl methacrylate-allyl  
 methacrylate-hydroxyethyl acrylate graft copolymer, dried at  
 120° for 10 min, covered with an organic solution (A) containing  
 Ph2I+BF4- and 3,4-epoxycyclohexylmethyl methacrylate homopolymer,  
 dried at 70° for 10 min, irradiated with UV, and baked at  
 140° for 10 min to give a surface with good acid and  
 scratch resistance, vs. poor and poor, resp., using an acrylic  
 melamine resin instead of A.

IT 133768-35-1

(photocurable, clear top coatings, containing cationic  
 initiators, on aqueous colored bases, with acid and scratch  
 resistance)

RN 133768-35-1 HCAPLUS

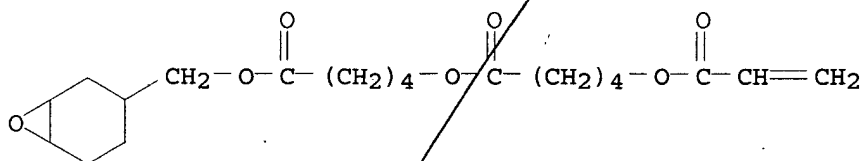
CN Pentanoic acid, 5-[(1-oxo-2-propenyl)oxy]-, 5-(7-  
 oxabicyclo[4.1.0]hept-3-ylmethoxy)-5-oxopentyl ester, polymer with  
 butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 133768-34-0

CMF C20 H30 O7

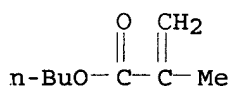




CM 2

CRN 97-88-1

CMF C8 H14 O2



IC ICM B05D001-36

ICS B05D003-06; B05D005-00; B05D007-24

CC 42-10 (Coatings, Inks, and Related Products)

IT 128703-08-2 133768-35-1 153244-92-9 153412-61-4

(photocurable, clear top coatings, containing cationic  
 initiators, on aqueous colored bases, with acid and scratch  
 resistance)

L19 ANSWER 46 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:132234 HCAPLUS

DOCUMENT NUMBER: 118:132234

TITLE: Dental adhesives containing  
 radical-polymerizing copolymers and monomers  
 and polymerization initiators

INVENTOR(S): Yamamoto, Naoki; Mukai, Nobuhiro; Makino,  
 Takayuki; Yamazaki, Hiroko

PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 04273804 | A2   | 19920930 | JP 1991-55679   | 1991<br>0228 |

PRIORITY APPLN. INFO.: JP 1991-55679

1991  
0228

AB Dental adhesives contain (a) copolymer powders of radical-polymerizing unsatd. monomers, which do not contain carboxyl group or carboxylic anhydride residue in the mols., with polymerizing unsatd. group-containing P compds., (b) radical-polymerizing unsatd. monomers, and

(c) radical polymerization initiators as the main ingredients. Me methacrylate-methacryloyloxyethyl phosphate copolymer (I) (preparation given) 5, N,N-diethanol-p-toluidine 0.05, p-toluenesulfinic acid 0.02, Me methacrylate 60, triethylene glycol dimethacrylate 40 weight parts, and 1.0 weight% (based on the monomers) benzoyl peroxide were mixed to give an adhesive, which was applied to an acrylic resin and kept in H<sub>2</sub>O for 1 mo to show bonding strength of 144 kg/cm<sup>2</sup>, vs. 43 kg/cm<sup>2</sup>, for the control containing poly(methacrylic acid) instead of I.

IT 146188-96-7P

(preparation of, as dental adhesive, polymerization initiators in)

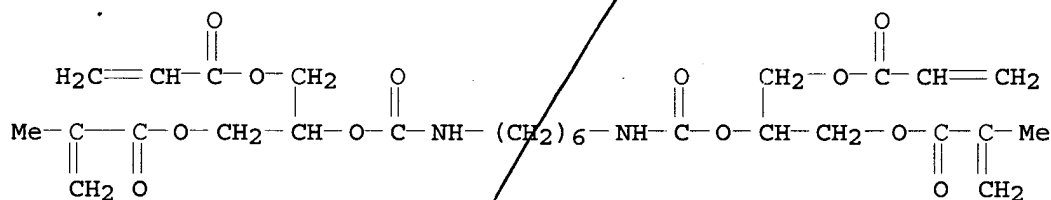
RN 146188-96-7 HCAPLUS

CN 11,14-Dioxo-2,9-diazaheptadec-16-enoic acid, 16-methyl-10,15-dioxo-12-[[[(1-oxo-2-propenyl)oxy]methyl]-, 1-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-2-[(1-oxo-2-propenyl)oxy]ethyl ester, polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), methyl 2-methyl-2-propenoate and 2-(phosphonoxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 91105-84-9

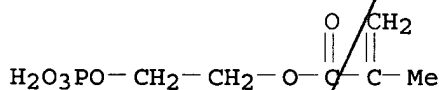
CMF C28 H40 N2 O12



CM 2

CRN 24599-21-1

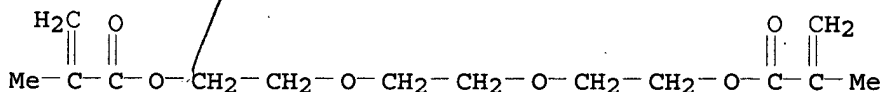
CMF C6 H11 O6 P



CM 3

CRN 109-16-0

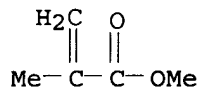
CMF C14 H22 O6



CM 4

CRN 80-62-6

CMF C5 H8 O2



IC ICM A61K006-00

ICS C08F230-02; C09J004-02

CC 63-7 (Pharmaceuticals)

IT 75302-76-0P 146188-93-4P 146188-94-5P 146188-95-6P  
 146188-96-7P 146188-97-8P 146188-98-9P 146188-99-0P  
 146189-00-6P 146189-01-7P 146189-02-8P 146219-87-6P  
 146219-88-7P 146219-89-8P 146332-36-7P

(preparation of, as dental adhesive, polymerization initiators  
 in)

L19 ANSWER 47 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:560657 HCAPLUS

DOCUMENT NUMBER: 115:160657

TITLE: Photopolymerizable thermoplastic resin compositions

INVENTOR(S): Toriki, Akira; Kato, Kiyoshi; Ito, Yutaka

PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

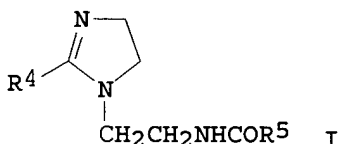
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 03091503 | A2   | 19910417 | JP 1989-228419  | 1989<br>0905 |

PRIORITY APPLN. INFO.: JP 1989-228419

1989  
0905

GI



AB The title compns., odorless and mild on the skin with good storage stability and processability, are formulated by adding 0.01-0.5% camphorquinone, 0.05-2% benzophenone-based polyfunctional peroxy esters, and 0.02-1% ≥1 amine from tribenzylamine, R1R2R3N

(R1 = C22-34 alkyl; R2, R3 = C1-7 hydrocarbyl), and I (R4; R5 = C11-25 alkyl) to 100 parts mixts. of 10-80% ethylenic monomers and 20-90% fillers. Thus, a composition of 2,2-bis[4'-(2-hydroxy-3-methacryloyloxypropyl)phenyl]propane 11, di(2-methacryloyloxyethyl) 2,2,4-trimethylhexamethylenecarbamate 5, 1,2-bis(3-methacryloyloxy-2-hydroxypropoxy)ethane 5, PMMA beads 20, SiO<sub>2</sub> 1, Al(OH)<sub>3</sub> 58, camphorquinone 0.3, 3,3',4,4'-tetra(tert-butylperoxycarbonyl)benzophenone 0.8, and dimethyldocosylamine (II) 0.3 part showed storage stability (time until onset of solidification when kept at 70°) 12 h, good extrusion processability without polymer formation, curing time under a halogen lamp 5 min, and no odor vs. 2 h, poor processability with polymer formation, 5 min, and odor, resp., for a control containing dimethylaminoethyl methacrylate in place of II.

IT 136350-91-9P 136380-32-0P

(preparation of, containing fillers, UV-cured, with good processability, photosensitizers and polymerization **initiators** and reducing agents for)

RN 136350-91-9 HCAPLUS

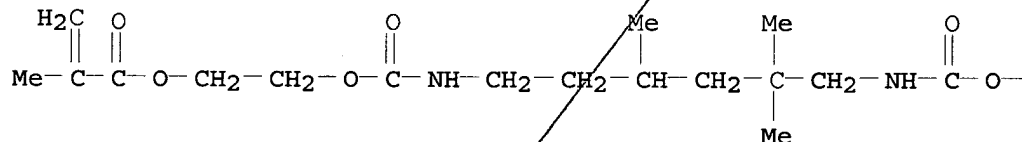
CN 11,14-Dioxa-2,9-diazaheptadec-16-enoic acid, 4,4,6,16-tetramethyl-10,15-dioxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with (1-methylethylidene)bis[4,1-phenylene(2-hydroxy-3,1-propanediyl)] bis(2-methyl-2-propenoate) and α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

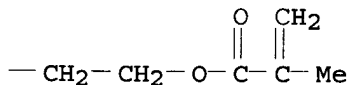
CRN 41137-60-4

CMF C23 H38 N2 O8

PAGE 1-A



PAGE 1-B

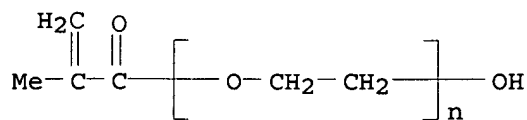


CM 2

CRN 25736-86-1

CMF (C2 H4 O)<sub>n</sub> C4 H6 O2

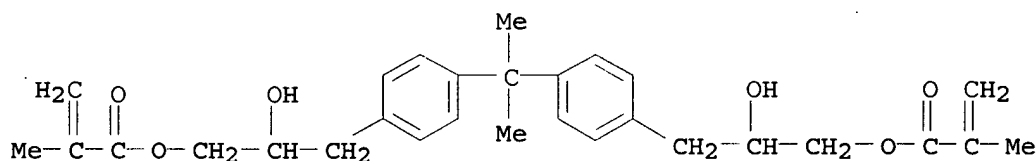
CCI PMS



CM 3

CRN 24577-48-8

CMF C29 H36 O6



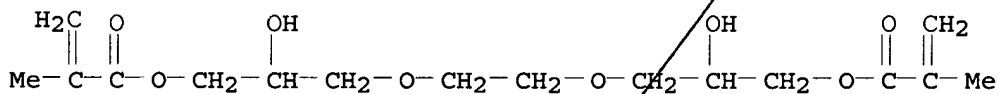
RN 136380-32-0 HCAPLUS

CN 11,14-Dioxo-2,9-diazaheptadec-16-enoic acid, 4,4,6,16-tetramethyl-10,15-dioxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 1,2-ethanediylbis[oxy(2-hydroxy-3,1-propanediyl)] bis(2-methyl-2-propenoate) and (1-methylethylidene)bis[4,1-phenylene(2-hydroxy-3,1-propanediyl)] bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 68856-43-9

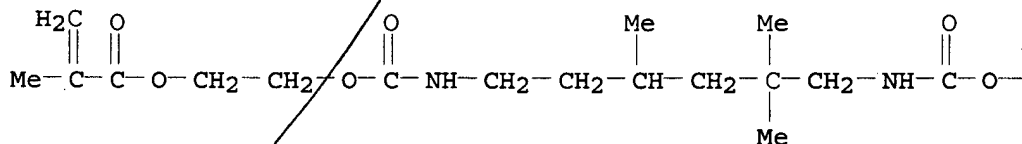
CMF C16 H26 O8



CM 2

CRN 41137-60-4

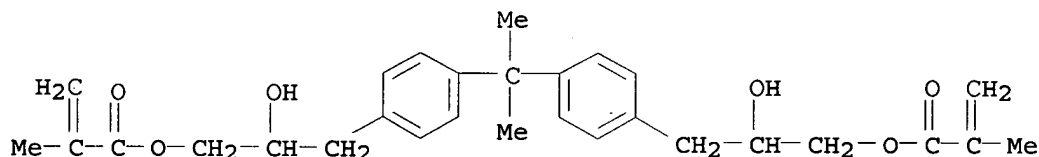
CMF C23 H38 N2 O8



PAGE 1-A

$$-\text{CH}_2-\text{CH}_2-\text{O}-\overset{\text{O}}{\overset{\parallel}{\text{C}}}-\overset{\text{CH}_2}{\overset{\parallel}{\text{C}}}-\text{Me}$$

CRN 24577-48-8  
CMF C29 H36 O6



(preparation of, containing fillers, UV-cured, with good processability, photosensitizers and polymerization **initiators** and reducing agents for)

L19 ANSWER 48 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1987:544886 HCAPLUS  
DOCUMENT NUMBER: 107:144886  
TITLE: Toner for electrostatic image development  
INVENTOR(S): Kato, Shigeo; Inoue, Sajiro  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE |
|-------------|------|----------|-----------------|------|
| -----       | ---- | -----    | -----           |      |
| -----       |      |          |                 |      |
| JP 62091959 | A2   | 19870427 | JP 1985-232599  |      |

1985  
1018

PRIORITY APPLN. INFO.: JP 1985-232599

1985  
1018

AB Electrostatog. toner suitable for heat roller fixing, having high impact resistance, flocculation resistance, flow, and durability, and fixable without offsetting and staining copy system is composed of at least a binder resin and a colorant. The binder resin is prepared by polymerizing a mixture containing  $\geq 1$  monomer selected from each of the following 3 groups: (A) styrene (I) and

its derivs., (B) acrylic esters and/or methacrylic esters, and (C) maleic acid and its esters in the presence of a polymerization initiator having 10-h half-life temperature of  $\geq 110^\circ$ , at a temperature  $0-40^\circ$  higher than the half-life temperature of the polymerization initiator. Thus, I 6.9, Bu acrylate 23.5, monobutyl maleate 6.0,  $C_6H_4(CH:CH_2)_2$  1.4, and  $(Me_3C)_2O_2$  (II) 1.0 part were mixed; dropwise added to boiling xylene, and stirred to obtain a copolymer. The mixture containing the ground polymer (about 2 mm mesh) 100, magnetite 65, metal complex dye 2, and low mol. weight polypropylene 4 parts was heat-kneaded and pulverized. The powder 100 parts was mixed with hydrophobic colloidal silica 0.4 part to give a toner (triboelec. charge  $-15 \mu C/g$ ) which was used in a PPC copying machine and heat-fixed to give high quality images with no fog even after continuous 50,000 copies and no staining to machine parts. The control toner using copolymer polymerized using Bz2O2 instead of II exhibited triboelec. charge of only  $-5 \mu C/g$ .

IT 110306-34-8

(polymerization initiator for, for electrostatic image developing toner)

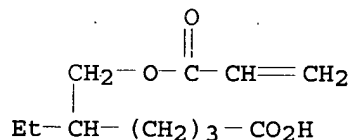
RN 110306-34-8 HCAPLUS

CN 2-Butenedioic acid (2Z)-, monobutyl ester, polymer with diethenylbenzene, ethenylbenzene and 5-[[1-oxo-2-propenyl]oxy]methyl]heptanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 110306-33-7

CMF C11 H18 O4

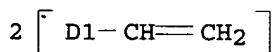


CM 2

CRN 1321-74-0

CMF C10 H10

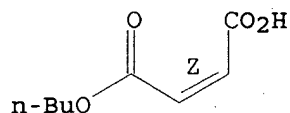
CCI IDS



CM 3

CRN 925-21-3  
CMF C8 H12 O4

Double bond geometry as shown.



CM 4

CRN 100-42-5  
CMF C8 H8

H<sub>2</sub>C=CH-Ph

IC ICM G03G009-08  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 76643-42-0 85931-71-1 110306-30-4 110306-31-5 110306-32-6  
110306-34-8 110351-68-3  
(polymerization initiator for, for electrostatic image developing toner)

L19 ANSWER 49 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:460229 HCAPLUS

DOCUMENT NUMBER: 107:60229

TITLE: Photocurable acrylic polymer information recording media

INVENTOR(S): Sudo, Ryoichi; Miwa, Hiroaki; Tajima, Tetsuo

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Maxell, Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE         |
|------------------------|------|----------|-----------------|--------------|
| JP 62013307            | A2   | 19870122 | JP 1985-152521  | 1985<br>0712 |
| JP 06044354            | B4   | 19940608 | JP 1985-152521  | 1985<br>0712 |
| PRIORITY APPLN. INFO.: |      |          |                 |              |

AB Recording media with accurate stamper transcription, low retardation, good heat resistance, and high tensile strength are prepared by feeding a mixture of photocurable acrylic polymer [copolymer of a compound (viscosity at 25° ≤3000 cP) with ≥4 (meth)acrylic groups, a dicarbamic acid ester with 2 (meth)acrylic groups, and a (meth)acrylic acid ester] and a



photopolymn. initiator into a release agent-treated stamper covered by a transport plate and irradiating to cure the mixture A mixture of DPCA 30 40, 2:1 (mol) 2-hydroxyethyl methacrylate-isophorone diisocyanate adduct 30, isobornyl methacrylate 28, and benzoin iso-Pr ether 2% was filled in a stamper and irradiated 40 s with 400 mW/cm<sup>2</sup> UV radiation of 320-400 nm wavelength to give a 1.2-mm-thick recording medium having good imaging properties, retardation (830 nm) 0.5 nm, heat-distortion temperature 110°, tensile strength 550 kg/cm<sup>2</sup>, warping <0.1 mm/300 mm, and transparency (830 nm) 99%.

IT 109359-20-8 109359-22-0 109359-24-2  
109359-26-4 109359-27-5 109389-89-1  
109488-04-2 109488-05-3

(photocurable recording media, containing photopolymn. initiators)

RN 109359-20-8 HCAPLUS

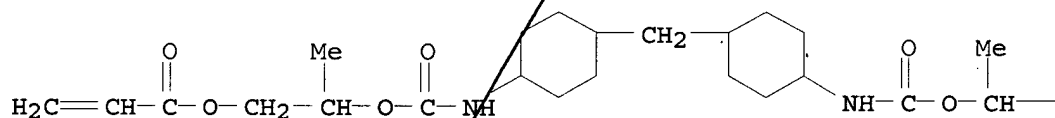
CN Hexanoic acid, 6-[[[1-oxo-2-propenyl]oxy]-, 2-[[[3-[[[1-oxo-6-[[[1-oxo-2-propenyl]oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[[[1-oxo-2-propenyl]oxy]hexyl]oxy]methyl]propoxy]methyl]-2-[[[1-oxo-6-[[[1-oxo-2-propenyl]oxy]hexyl]oxy]methyl]-1,3-propanediyl ester, polymer with methylenebis[4,1-cyclohexanediyl]imino]carbonyloxy(2-methyl-2,1-ethanediyl)] di-2-propenoate and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

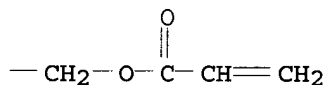
CRN 109359-18-4

CMF C27 H42 N2 O8

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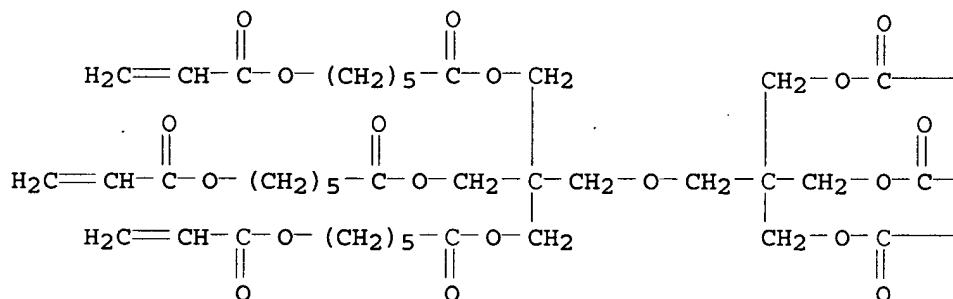


CM 2

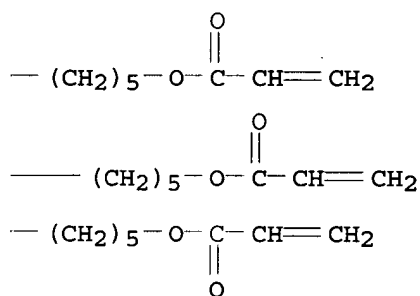
CRN 93294-97-4

CMF C64 H94 O25

PAGE 1-A



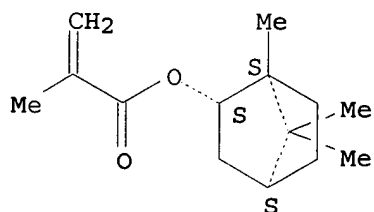
PAGE 1-B



CM 3

CRN 7534-94-3  
CMF C14 H22 O2

Relative stereochemistry.

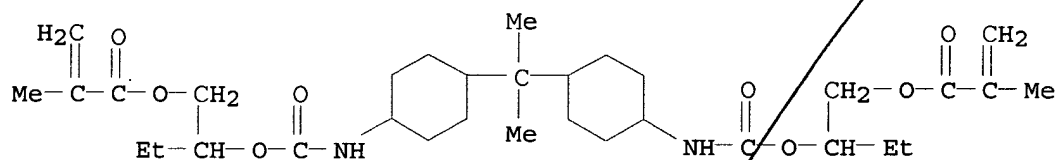


RN 109359-22-0 HCAPLUS

CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 2-[[[3-[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]propoxy]methyl]-2-[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]-1,3-propanediyl ester, polymer with (1-methylethylidene)bis[4,1-cyclohexanediyliminocarbonyloxy(2-ethyl-2,1-ethanediyl)] bis(2-methyl-2-propenoate) and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

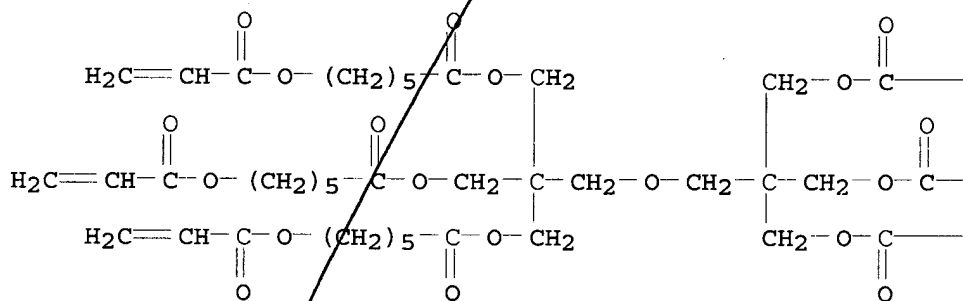
CM 1

CRN 109359-21-9  
CMF C33 H54 N2 O8



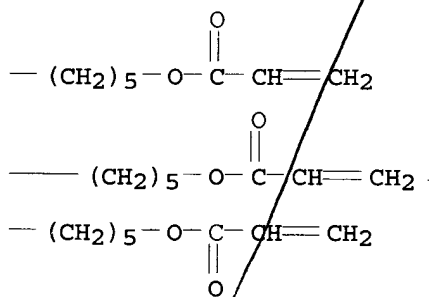
CM 2

CRN 93294-97-4  
CMF C64 H94 O25



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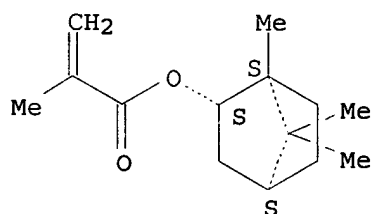
PAGE 1-B



CM 3

CRN 7534-94-3  
CMF C14 H22 O2

Relative stereochemistry.



RN 109359-24-2 HCAPLUS

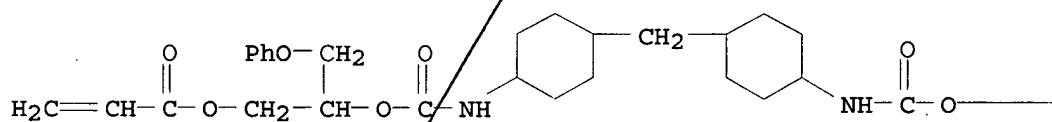
CN 2-Propenoic acid, 6-[[1-oxo-2-propenyl]oxy]-, 2-[[3-[[1-oxo-6-[[1-oxo-2-propenyl]oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[[1-oxo-2-propenyl]oxy]hexyl]oxy]methyl]propoxy]methyl]-2-[[[1-oxo-6-[[1-oxo-2-propenyl]oxy]hexyl]oxy]methyl]-1,3-propanediyl ester, polymer with methylenebis[4,1-cyclohexanediyliminocarbonyloxy[2-(phenoxy)methyl]-2,1-ethanediyl]] di-2-propenoate and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

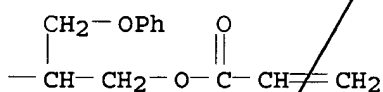
CRN 109359-23-1

CMF C39 H50 N2 O10

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PAGE 1-B

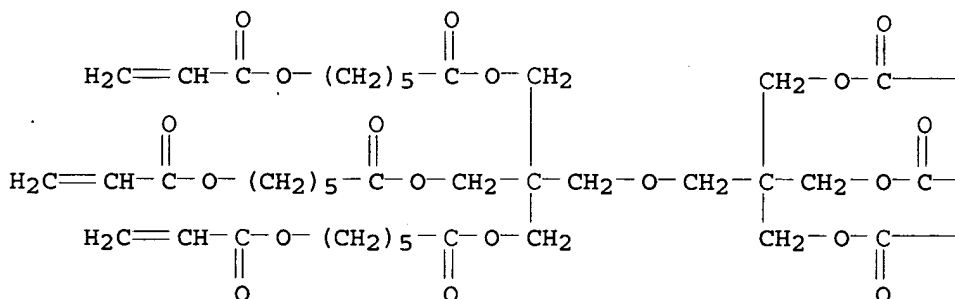


CM 2

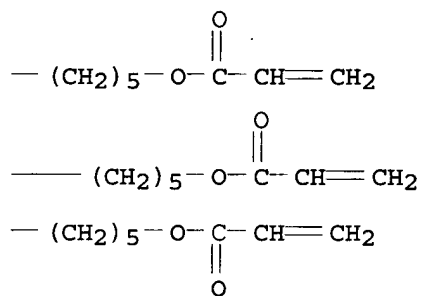
CRN 93294-97-4

CMF C64 H94 O25

PAGE 1-A



PAGE 1-B

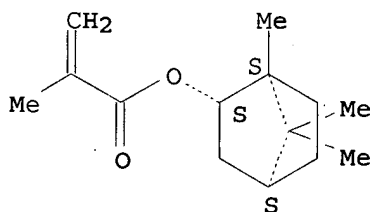


CM 3

CRN 7534-94-3

CMF C14 H22 O2

Relative stereochemistry.

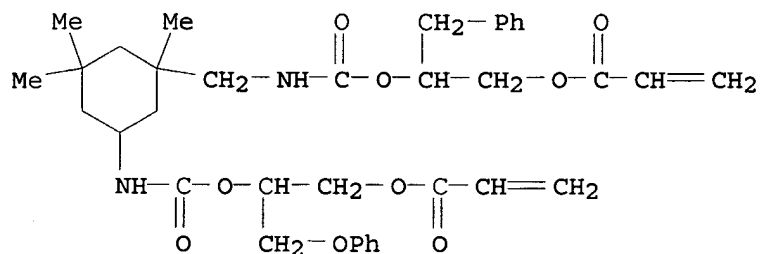


RN 109359-26-4 HCAPLUS

CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 2-[[3-[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy)methyl]propoxy)methyl]-2-[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy)methyl]-1,3-propanediyl ester, polymer with 3-phenoxy-2-[[[3,3,5-trimethyl-5-[[[1-[[1-oxo-2-propenyl)oxy]methyl]-2-phenylethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]propyl 2-propenoate and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

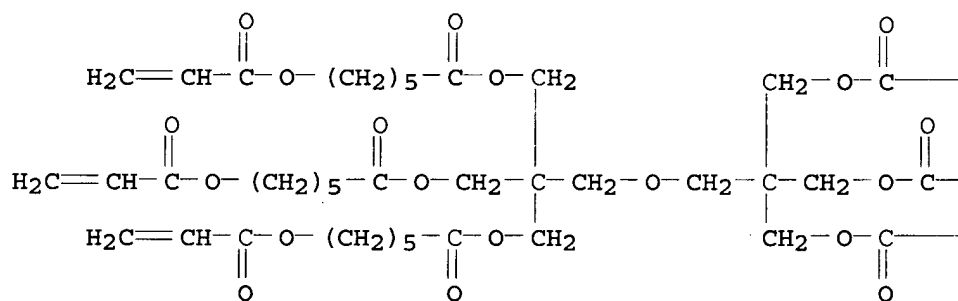
CRN 109359-25-3  
CMF C36 H46 N2 O9



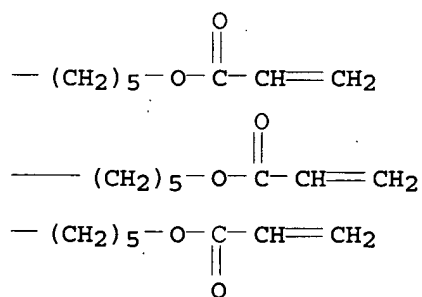
CM 2

CRN 93294-97-4  
CMF C64 H94 O25

PAGE 1-A



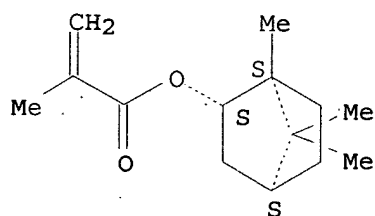
PAGE 1-B



CM 3

CRN 7534-94-3  
CMF C14 H22 O2

Relative stereochemistry.



RN 109359-27-5 HCAPLUS

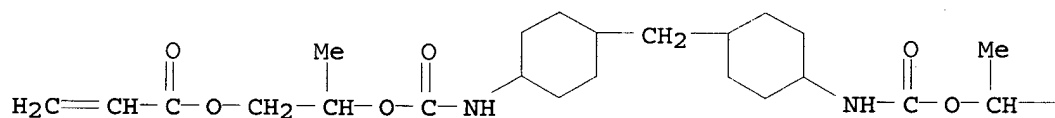
CM 2-Propenoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 2-[[3-[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]propoxy]methyl]-2-[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]-1,3-propanediyl ester, polymer with methylenebis[4,1-cyclohexanediyliminocarbonyloxy(2-methyl-2,1-ethanediyl)] di-2-propenoate and octahydro-4,7-methano-1H-inden-5-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

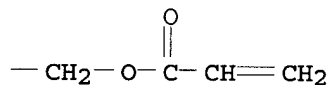
CRN 109359-18-4

CMF C27 H42 N2 O8

PAGE 1-A



PAGE 1-B

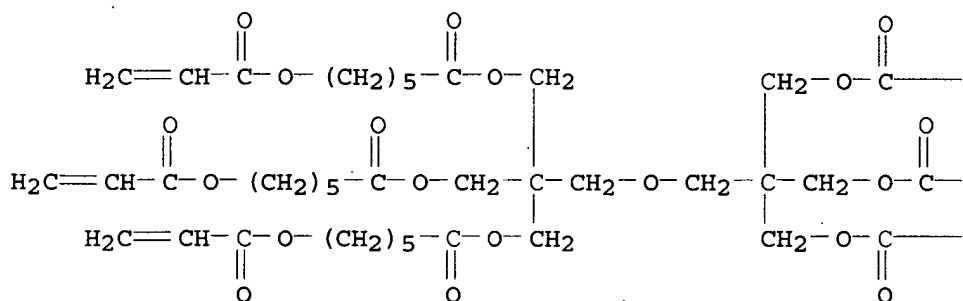


CM 2

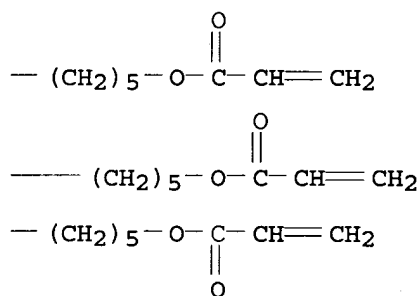
CRN 93294-97-4

CMF C64 H94 O25

PAGE 1-A



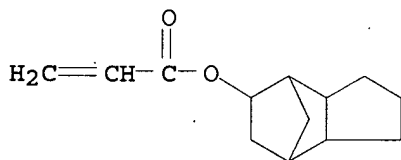
PAGE 1-B



CM 3

CRN 7398-56-3

CMF C13 H18 O2



RN 109389-89-1 HCAPLUS

CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 2-[[3-[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]propoxy]methyl]-2-[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]-1,3-propanediyl ester, polymer with cyclohexyl 2-methyl-2-propenoate and (methyl-1,3-phenylene)bis(iminocarbonyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

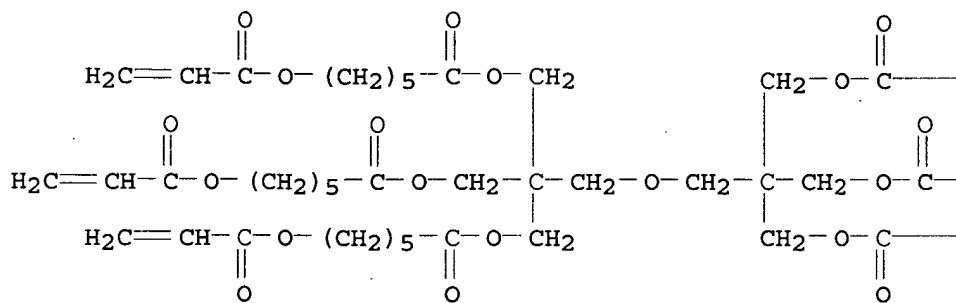
CM 1

CRN 93294-97-4

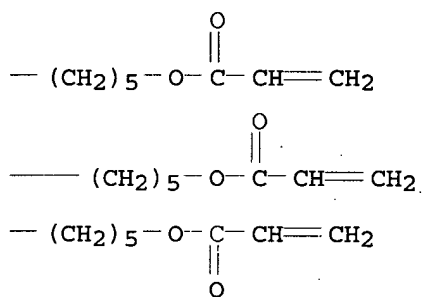
CMF C64 H94 O25



PAGE 1-A



PAGE 1-B

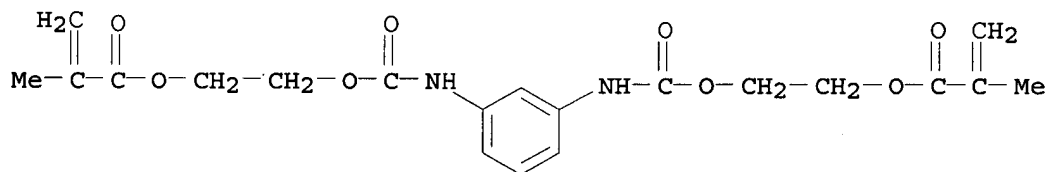


CM 2

CRN 55481-35-1

CMF C21 H26 N2 O8

CCI IDS

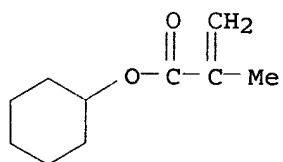


D1-Me

CM 3

CRN 101-43-9

CMF C10 H16 O2



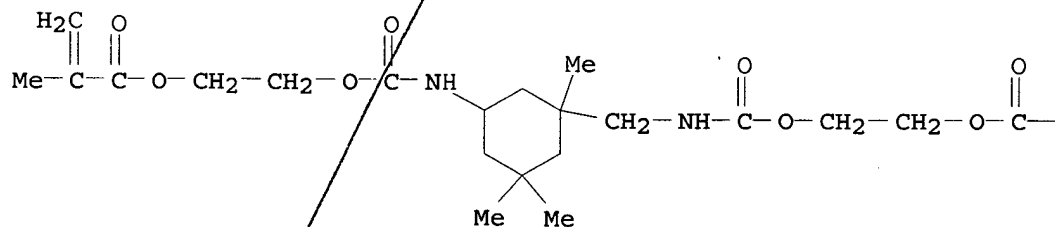
RN 109488-04-2 HCAPLUS  
 CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, triester with  
 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol]  
 tri-2-propenoate, polymer with exo-1,7,7-  
 trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and  
 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-  
 propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl  
 1]oxy]ethyl 2-ethyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

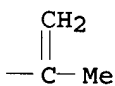
CRN 42405-01-6

CMF C24 H38 N2 O8

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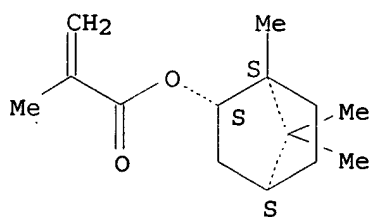


CM 2

CRN 7534-94-3

CMF C14 H22 O2

Relative stereochemistry.

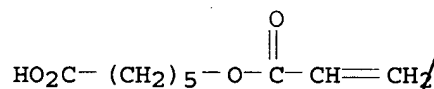


CM 3

CRN 93365-36-7  
 CMF C46 H64 O19  
 CCI IDS

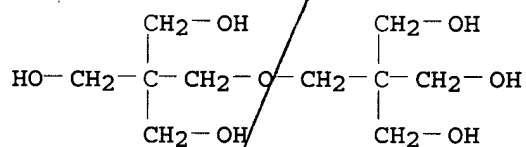
CM 4

CRN 93365-33-4  
 CMF C9 H14 O4



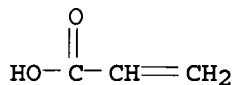
CM 5

CRN 126-58-9  
 CMF C10 H22 O7



CM 6

CRN 79-10-7  
 CMF C3 H4 O2



RN 109488-05-3 HCAPLUS  
 CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, triester with  
 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol]  
 tri-2-propenoate, polymer with endo-1,7,7-  
 trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and

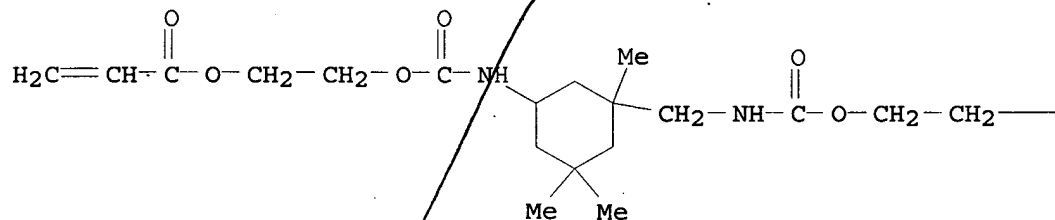
2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

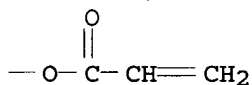
CRN 42404-50-2

CMF C22 H34 N2 O8

PAGE 1-A



PAGE 1-B

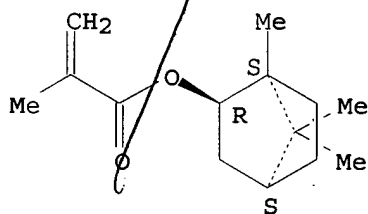


CM 2

CRN 4647-84-1

CMF C14 H22 O2

Relative stereochemistry.



CM 3

CRN 93365-36-7

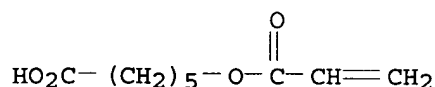
CMF C46 H64 O19

CCI IDS

CM 4

CRN 93365-33-4

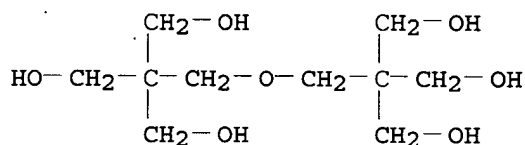
CMF C9 H14 O4



CM 5

CRN 126-58-9

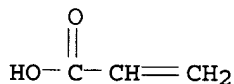
CMF C10 H22 O7



CM 6

CRN 79-10-7

CMF C3 H4 O2



IC ICM B29C039-02

ICS B29C039-22; B29C039-26; C08F002-48; C08F020-10; G11B007-26

ICI B29K105-24, B29L011-00, B29L031-34

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74

IT 109359-19-5 109359-20-8 109359-22-0

109359-24-2 109359-26-4 109359-27-5

109389-89-1 109488-04-2 109488-05-3

(photocurable recording media, containing photopolymer initiators)

L19 ANSWER 50 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:225823 HCAPLUS

DOCUMENT NUMBER: 104:225823

TITLE: Curable polymer compositions

INVENTOR(S): Sakamoto, Junichi; Miyake, Hideo

PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE  |
|-------------|------|----------|-----------------|-------|
| -----       | ---- | -----    | -----           | ----- |
| JP 60243114 | A2   | 19851203 | JP 1984-99092   |       |

1984  
0516JP 63007570  
PRIORITY APPLN. INFO.:

B4 19880217

JP 1984-99092

1984  
0516

AB Mixts. of epoxy resins, CO<sub>2</sub>H-containing photopolymerizable compds., and, optionally, other photopolymerizable compds., and peroxy ester and/or peroxy ketal thermal polymerization initiators cure completely when partially shielded from radiation. Thus, a 95:108 mixture of Epikote 828 and monoacryloyloxyethyl succinate 100, benzil di-Me ketal 0.5, PhCH<sub>2</sub>NMe<sub>2</sub> 0.5, and 1,1-bis(tert-butylperoxy)-3,3,5-trimethylcyclohexane 1.0 part was injected between 2 glass plates, shielded on one side with Al, irradiated by UV for 42 s and heated at 120° for 30 min giving Barcol hardness 31, light transmittance 76%, and elec. resistance 1 + 1015 Ω-cm on the exposed side and 29, 74, and 1 + 1015 resp., on the shielded side.

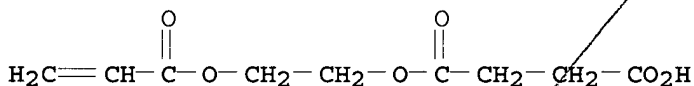
IT 102513-45-1P 102628-29-5P

(preparation of, by photochem. crosslinking with peroxy ester or ketal initiators)

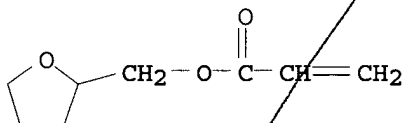
RN 102513-45-1 HCAPLUS

CN Butanedioic acid, mono[2-[(1-oxo-2-propenyl)oxy]ethyl] ester, polymer with (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and (tetrahydro-2-furanyl)methyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

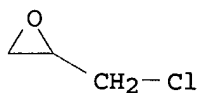
CRN 50940-49-3  
CMF C9 H12 O6

CM 2

CRN 2399-48-6  
CMF C8 H12 O3

CM 3

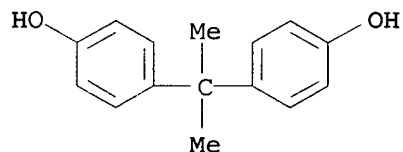
CRN 106-89-8  
CMF C3 H5 Cl O



CM 4

CRN 80-05-7

CMF C15 H16 O2



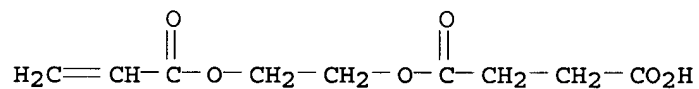
RN 102628-29-5 HCAPLUS

CN Butanedioic acid, mono[2-[(1-oxo-2-propenyl)oxy]ethyl] ester,  
polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 50940-49-3

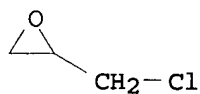
CMF C9 H12 O6



CM 2

CRN 106-89-8

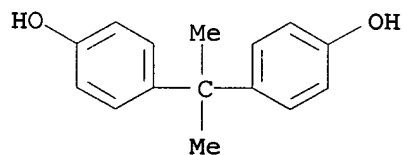
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



IC ICM C08G059-68  
ICA C09D003-58; C09J003-16; H01B003-40; H01L023-30  
CC 37-6 (Plastics Manufacture and Processing)  
IT 102513-45-1P 102628-28-4P 102628-29-5P  
102646-25-3P  
(preparation of, by photochem. crosslinking with peroxy ester or ketal initiators)

L19 ANSWER 51 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1983:559379 HCAPLUS  
DOCUMENT NUMBER: 99:159379  
TITLE: Water-containing polymers  
PATENT ASSIGNEE(S): Okura Industrial Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 58052302 | A2   | 19830328 | JP 1981-149650  | 1981<br>0924 |
| JP 60056721 | B4   | 19851211 | JP 1981-149650  | 1981<br>0924 |

PRIORITY APPLN. INFO.: JP 1981-149650

AB Water-containing polymers are prepared by polymerizing water-in-oil emulsions of vinyl compds. and dicarboxylic acid esters of polyalkylene glycols containing  $\geq$  C3 oxyalkylene units in the presence of bases and polymerization initiators. Thus, a mixture of styrene 60, acrylonitrile 20, ethylene dimethacrylate 20, polypropylene glycol dimaleate (polyoxypropylene mol. weight 2000) 10, Na<sub>3</sub>BO<sub>3</sub> 0.5, and water 110 parts was stirred to give a water-in-oil emulsion having viscosity 13.1 cP at 23°. The above emulsion was mixed with 1.1 parts 10% Co naphthenate solution in styrene and 1.1 parts 55% 2-butanone peroxide solution in di-Me phthalate and heated 4 h at 60° to give a water-containing white copolymer [ 87480-63-5].

IC C08F002-26  
CC 37-3 (Plastics Manufacture and Processing)

L19 ANSWER 52 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1981:71409 HCAPLUS  
DOCUMENT NUMBER: 94:71409  
TITLE: Fundamental studies on the copolymers of crystalline monomers having urethane linkages and hydroxypropyl dimethacrylate. 2. Physical properties of the copolymers  
AUTHOR(S): Miyashita, Hitoshi  
CORPORATE SOURCE: Dent. Coll., Hiroshima Univ., Hiroshima, Japan  
SOURCE: Hiroshima Daigaku Shigaku Zasshi (1979), 11(2), 181-204  
CODEN: HUDJAN; ISSN: 0046-7472  
DOCUMENT TYPE: Journal



LANGUAGE: Japanese

AB Phys. properties of the copolymers of hydroxypropyl dimethacrylate and urethane derivs. were studied. When large amts. of polymerization initiator [benzoyl peroxide (BPO)] and accelerator [N,N-dimethyl-p-toluidine (DMPT)] were used in the polymerization, the hardening time was shortened. The following 3 copolymers were prepared: bis(methacryloxyethyl)hexamethylene-1,6-dicarbamate-hydroxypropyl bismethacrylate copolymer (I-HPDM) [76245-49-3], bis(methacryloxyethyl)toluene-2,4-dicarbamate-HPDM copolymer (II-HPDM) [76245-50-6], and bis(methacryloxyethyl)bis(phenylmethane)-4,4'-dicarbamate-HPDM copolymer (III-HPDM) [76245-51-7]. For I- and III-HPDM preparation, the optimal concns. of BPO and DMPT were 0.70 and 0.25 weight%, resp., whereas for II-HPDM, the optimum concns. were 0.70 and 0.50 weight%, resp. The optimum copolymer composition ratio for all 3 copolymers was 40/60 at 37° and 70/30 at 80° to obtain favorable phys. properties. Among the 3 copolymers, II-HPDM showed superior properties, its Knoop hardness was 28.7 and the maximum compression stress was 1647 kg/cm<sup>2</sup>. As compared to a reference compound, polymethacrylate resin, the degradability of II- and III-HPDM was considerably less. II-HPDM (40/60) appeared to be a suitable material for dental filling.

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 35

L19 ANSWER 53 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1977:406407 HCAPLUS

DOCUMENT NUMBER: 87:6407

TITLE: Possible synthesis of a derivative of N,N-dimethylaminoethyl methacrylate and its radical polymerization in aqueous solutions

AUTHOR(S): Mkrtchyan, L. A.; Simonyan, R. A.; Martynenko, A. I.; Krapivin, A. M.; Krut'ko, E. B.; Klement'eva, T. V.; Topchiev, D. A.; Kabanov, V. A.

CORPORATE SOURCE: Inst. Neftekhim. Sint. im. Topchieva, Moscow, USSR

SOURCE: Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya (1977), 19(3), 214-16  
CODEN: VYSBAI; ISSN: 0507-5483

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Reaction of BrCH<sub>2</sub>CO<sub>2</sub>H [79-08-3] with CH<sub>2</sub>:CMeCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub> [2867-47-2] in AcEt gave water-soluble, crystalline compound (I) [62723-63-1] of structure. CH<sub>2</sub>:CMeCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>N+Me<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H . . c ntdot . . -OC(O)CH<sub>2</sub>+NMe<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O<sub>2</sub>CCMe:CH<sub>2</sub> Br- established by elemental anal., potentiometric titration, IR and NMR spectroscopy. I was stable in aqueous solns. at pH 2-6. Radical polymerization of I in aqueous

solns. at 20° gave the corresponding polymer [62725-47-7]. Elemental anal., NMR and titration data confirmed the expected structure of the polymer; the absence of double bonds in the polymer was indicated by IR spectroscopy. The polymerization was of the 1st order in I and 0.5 order in the initiator (AIBN).

CC 35-3 (Synthetic High Polymers)

Section cross-reference(s): 23

L19 ANSWER 54 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1975:515761 HCAPLUS

DOCUMENT NUMBER: 83:115761  
 TITLE: Water-containing resins  
 INVENTOR(S): Kato, Hiroyuki; Tatsumichi, Hidemaro  
 PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Tokkyo Koho, 8 pp.  
 CODEN: JAXXAD  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| -----       | ---- | -----    | -----           |              |
| JP 50006234 | B4   | 19750312 | JP 1970-99424   | 1970<br>1113 |
|             |      |          |                 | 1970<br>1113 |

PRIORITY APPLN. INFO.: JP 1970-99424 A

AB An oil phase containing (meth)acrylate ester and optionally other vinyl monomer in 50-100:0-50 ratio was mixed with an aqueous phase containing water-soluble vinyl monomer or its polymer to give W/O emulsion, and polymerization in the presence of radical initiator or redox catalyst gave water [7732-18-5]-containing polymer. For example, glycerol [56-81-5] 184, methacrylic acid [79-41-4] 378, and phenothiazine 0.24 g in 1200 cm<sup>3</sup> toluene containing 6 cm<sup>3</sup> H<sub>2</sub>SO<sub>4</sub> was heated to 112.5° with distillation of 70 cm<sup>3</sup> water and then further heated with 98 g maleic anhydride [108-31-6] at 113.6 cm<sup>3</sup> water with distillation of 18 cm<sup>3</sup> water, and the reaction mixture was mixed with 0.2 g hydroquinone and concentrated at 50°/6 mm Hg to give mainly bis(2-hydroxy-3-methacryloyloxypropyl) maleate (I) [24553-12-6]. I (50 g) was mixed with 50 g aqueous solution containing Na acrylate 17.5, Et<sub>3</sub>N 3, and (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> 0.1% to give W/O emulsion which was stirred with 1 g Bz<sub>2</sub>O<sub>2</sub> at 90° for 2 hr to give water-containing, nonflammable bis(2-hydroxy-3-methacryloyloxypropyl) maleate-sodium acrylate polymer [56366-78-0] with tensile strength 12.5 kg/cm<sup>2</sup>, compression strength 316 kg/cm<sup>2</sup>, and impact strength 0.75 kg-cm/cm<sup>2</sup>. Water-containing resins also prepared were e.g., bis(2-hydroxy-3-methacryloyloxypropyl) maleate-2-ethylhexyl acrylate-sodium acrylate polymer [56366-79-1], bis(2-hydroxymethyl-3-methacryloyloxy-2-methylpropyl) maleate-sodium acrylate polymer [56366-81-5], bis(2-hydroxymethyl-3-methacryloyloxy-2-methylpropyl)phthalate-sodium acrylate polymer [56366-83-7], and bis[2-(2-methacryloyloxyethoxy)ethyl] adipate-magnesium acrylate polymer [56366-84-8].

IC C08F; C08L  
 CC 36-3 (Plastics Manufacture and Processing)